



## Chapter 2 • Alternatives



## Chapter 2: Alternatives

### 2.0 INTRODUCTION

As described in Chapter 1, the purpose and need for this land use planning process is to fulfill Congressional mandates from OPLMA that directed BLM to prepare comprehensive (Resource) Management Plans for the Beaver Dam Wash NCA and Red Cliffs NCA.

This legislation also required BLM to take actions and make land use allocations on public lands in Washington County that require the SGFO RMP to be amended. The Amendment is limited in scope to two issues: 1) identification of areas of public land in Washington County where biological conservation is a priority and the development of appropriate management to conserve and restore plant and animal species and natural communities within these areas; and 2) modification of certain existing OHV area designations (open, limited, or closed), to be in compliance with federal regulations, BLM's *Travel and Transportation Management Manual M-1626* and related agency policies.

This chapter describes and compares four alternative management approaches,

consisting of three new alternatives for the long-term management of the Beaver Dam Wash and Red Cliffs NCAs, and a No Action Alternative that includes the goals, objectives, and management decisions that apply from the SGFO RMP. These approaches vary by the scope and intensity of potential land use allocations, allowable uses, and management actions needed to achieve specific goals and objectives and address identified planning issues. The three new alternatives share a common conservation theme for management of the resource values for which each NCA received Congressional designation, through OPLMA. The St. George Field Office RMP goals, objectives, and management decisions comprise the No Action Alternative for the NCA management plans.

Also included in this chapter are tables displaying four management alternatives that address the two planning issues considered in the Amendment to the SGFO RMP. Like the alternative management approaches for the NCAs, these vary by the scope and intensity of potential land use allocations, allowable

### Great Basin Collared Lizard

*Crotaphytus bicinctores* has two black neck bands with a white band in between, giving the appearance of a collar. Females are not as brightly colored as males, except during the breeding season. Collared lizards are very tolerant of heat and are often seen basking on the top of rocks during the day.

Photo 2-1 Great Basin Collared Lizards, Red Cliffs NCA



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“The difference between a mountain and a molehill is your perspective.”  
–Al Neuharth,  
Founder of USA Today,  
1924–2013

uses, and management actions to achieve specific goals and objectives. Similarly, applicable goals, objectives, and management decisions from the SGFO RMP comprise the No Action Alternative for the Amendment.

Each alternative is subsequently assessed for potential environmental consequences and these are summarized in table formats for the two NCAs and the Amendment in this chapter. A detailed discussion of potential impacts by alternative for each of the three planning areas is presented in Chapter 4, Environmental Consequences.

2.1 DEVELOPMENT OF THE ALTERNATIVES

Using public comments, input from Cooperating Agencies, and issues and concerns identified by BLM staff and management, the interdisciplinary Planning Team drafted three new alternatives to address management of the two NCAs and the planning issues identified for the Amendment. One other alternative, Alternative A (No Action), provides the current management goals, objectives, and actions, as stated in the SGFO RMP, for each program or resource value. Implementing regulations for NEPA require the formulation of a reasonable range of alternatives to address identified resource conflicts or concerns. Each action alternative must meet the purpose and need for the plans, be viable and reasonable, be responsive to issues identified in scoping, and consistent with the established planning criteria (Appendix B). For the NCAs, each alternative was evaluated to ensure that it complied with the mandates from OPLMA, as well as FLPMA, other relevant laws, regulations, and policies, and the purpose, significance, and mission statements of each NCA. Similarly, the alternatives for the Amendment to the SGFO RMP were evaluated to ensure that they complied with FLPMA, as well as other relevant federal laws, regulations, and BLM policies.

Public input received during the scoping process (Photo 2-2 and Photo 2-3) was considered in the development of the alternatives and their management options; the public scoping process is described in more detail in Chapter 5. A number of state agencies, including the Utah Division of Wildlife Resources (UDWR), provided data and input that assisted the development of alternatives. Other federal agencies, including the USFWS and the United States Forest Service (USFS)-Dixie National Forest participated in the planning process. The State of Utah; Washington County, Utah; and Mohave County, Arizona, as formal Cooperating Agencies to this planning process, and the Shivwits Band of the Paiute Indian Tribe of Utah, were directly involved in the planning process and the development of alternatives. The Cooperating Agencies reviewed and provided comments on the preliminary drafts of the RMPs and RMP Amendment/Draft EIS. Chapter 5 provides additional detail on consultation and coordination related to this planning process.



Photo 2-2 Climbers at Public Scoping Meeting, St. George, Utah, March 2012

2.1.1 Management Guidance Common to All Alternatives

In the alternative decision tables that follow (Table 2-1 through Table 2-73), management direction (referred to in the tables as Guidance) that is common to all four alternatives are clearly displayed, as it crosses all columns in the tables. This guidance includes management actions carried forward from various planning documents, including Recovery Plans, Habitat Management Plans, Habitat Conservation Plans, and the SGFO RMP, where these actions were found to be acceptable and reasonable under all the alternatives.

One important management consideration that is common to all alternatives, resource programs, and the three planning areas is the integration of land health standards described in the Utah Standards and Guides (Appendix D). They identify the characteristics of healthy ecosystems on public lands and management actions that promote them. After approval in 1997, the land health standards became BLM-Utah policy, guiding the planning for and administration of public lands. They have been incorporated into all relevant management

Photo 2-3 Public Scoping Meeting, Salt Lake City, Utah, June 2010



decisions proposed for the Beaver Dam Wash and Red Cliffs NCAs and the Amendment to the SGFO RMP.

2.1.2 Management Guidelines

The purpose, significance, and mission statements for the two NCAs guided the development of the management actions presented in the alternatives (refer to Chapter 1 for these statements). Also considered were the planning criteria that are shown in Appendix B, the desired future conditions for the resources, and resource uses of each NCA; these are presented as goals and objectives in the alternative tables (Table 2-1 through Table 2-73).

2.2 SUMMARY DESCRIPTION OF THE ALTERNATIVES

2.2.1. Alternative A (No Action)

Alternative A (No Action) is required by NEPA and serves as a baseline against which to compare the environmental consequences that could be associated with implementation of other alternatives. Under this alternative, management for the two NCAs, and the public lands affected by the RMP Amendment, would primarily be derived from management decisions in the 1999 *St. George Field Office Record of Decision and Resource Management Plan*, as amended. Unless otherwise noted, or unless there is no similar action, Alternative A (No Action) directly quotes, rather than paraphrases or updates, the goals, objectives, and management decisions from this Record of Decision/RMP. As written, this alternative may not always clearly convey that it describes how resource values and public land programs have been managed since 1999. A description of the ongoing management provides a baseline against which to compare the three new alternatives and their environmental consequences. However, this alternative also reflects recent mandates for the three planning areas from OPLMA. As examples, the designation of BLM-managed wilderness in Washington County,

“There are two primary choices in life: to accept conditions as they exist, or accept the responsibility for changing them.”  
–Denis Waitley,  
American Motivational  
Speaker, 1933–



Gierisch Mallow

*Sphaeralcea gierischii* is a perennial with reddish-orange flowers. This member of the mallow family is found only on gypsum outcrops associated with the Harrisburg Member of the Kaibab Formation in Washington County, Utah, and the adjacent northern Mohave County, Arizona.

through OPLMA, modified decisions from the SGFO RMP. These modifications are reflected in Alternative A (No Action) for the Red Cliffs NCA as two designated wilderness units are located entirely or partially within this NCA. Alternative A (No Action) has also been updated to include the mandates from OPLMA that withdrew the public lands in both NCAs from entry, appropriation, and disposal under the public land laws (OPLMA Section 1974 (g) (1) and 1975 (g) (1). While Alternative A (No Action) continues to provide considerable valid management direction for the two NCAs, and the public lands that could be affected by the Amendment of the SGFO RMP, in many instances, management decisions from the SGFO RMP conflict with the mandates of OPLMA or lack the specificity needed for future management. This alternative does not meet the purpose and need for a comprehensive management plan for either NCA nor does it address the two planning issues identified for the Amendment, but is carried forward for analysis to comply with the requirements of NEPA and to serve as a baseline for the comparison of impacts associated with the three new alternatives.

2.2.2 Alternative B

Alternative B attempts to balance resource protection and human uses of the public lands in the two NCAs and on public lands that are addressed in the Amendment. For the two NCAs, management would focus on protecting native vegetation communities, wildlife habitats, cultural resources, and the scenic qualities of each area from threats, particularly loss to or damage from wild-land fires. The restoration of damaged lands is also emphasized under this alternative. Changes are proposed related to livestock grazing management strategies in Beaver Dam Wash NCA. Sustainable public recreation uses would be managed through zoning of the two NCAs, permitting, and the development of

Photo 2-4 Alternative B Proposes New ACECs for Species Such as the Federally-listed Endangered Gierisch Mallow



sustainable facilities that enhance visitor experiences. Under Alternative B, in the Beaver Dam Wash NCA, an Old Spanish National Historic Trail Management Corridor is proposed and management actions are identified to conserve, protect, and restore trail resources, associated settings, and primary uses within that corridor. Emphasis would be placed on environmental education, interpretation, and opportunities for citizen stewardship of NCA resources. Alternative B incorporates elements from the other alternatives, as well as unique elements that would further goals and objectives relating to scientific research opportunities in the two NCAs.

This alternative for the Amendment proposes to satisfy OPLMA's mandate related to areas of public land where biological conservation is a priority through two approaches: 1) the administrative designation of new ACECs and the retention of existing ACEC designations; and 2) the implementation of special management for public lands identified by the public during scoping where biological conservation is a priority, but where the species

Photo 2-5 Alternative B & C Propose to Protect Crucial Habitat for Mule Deer and Other Wildlife Species



present may not meet both the relevance and importance criteria required for ACEC designation. Three new ACECs (Photo 2-4) would be designated and eight existing ACECs would be carried forward. Management prescriptions are proposed for the new ACECs that would help to ensure the protection of these species through balanced levels of land use allocations and restrictions on public uses.

The biological conservation objectives mandated by OPLMA would also be satisfied through the implementation of special management prescriptions for an approximately 87,000 acre area of public lands, labeled by BLM as the Bull Valley Mountains Multi-Species Management Area, to protect crucial habitat and migration corridors for mule deer (Photo 2-5), other wildlife species, and diverse predators in northwestern Washington County. Changes are proposed for existing OHV area designations that would remove the mountain biking area designations and change the acres designated as "Open," "Limited," and "Closed," for cross-country motorized OHV travel, to comply

with federal regulations and BLM's Travel and Transportation Management guidance. The acreage identified as "Open" to cross-country OHV vehicle travel would be reduced from 80,668 acres under Alternative A (No Action) to 21,442 under this alternative.

2.2.3 Alternative C

Alternative C represents an approach to the conservation and protection of resource values that emphasizes higher levels of restrictions on certain land uses and activities, while continuing to allow for compatible public uses. Management of the two NCAs would also focus on protecting the ecological and scenic values of the NCAs from damage or loss to natural and human-caused impacts. Restoration of damaged lands would emphasize the use of native vegetation species and the least invasive methods to accomplish goals and objectives. Under this alternative, public lands in the NCAs would not be available for livestock grazing in the Beaver Dam Wash NCA. This alternative identifies acres in each NCA that would be managed for wilderness characteristics and as heritage areas focused on the protection of cultural resources. In the Beaver Dam Wash NCA, an Old Spanish National Historic Trail Management Corridor is proposed in Alternative C and management actions are identified to conserve, protect, and restore trail resources, associated settings, and primary uses within that corridor. Like Alternative B, this alternative emphasizes environmental education outreach, interpretation, and scientific research.

This alternative for the Amendment proposes to satisfy OPLMA's mandate related to areas of public land where biological conservation is a priority through the two approaches described above under Alternative B. Fourteen new ACECs for threatened, endangered or at-risk species are proposed for administrative designation and eight existing ACEC

Mule Deer

*Odocoileus hemionus* are primarily browsers, foraging on a variety of shrubs and forbs including leaves, needles, succulent stems, and grasses. Mule deer also enjoy domestic crops, and fruits and nuts. They need water as well—approximately 0.5 gallons a day per 100 lbs of body weight—so their home range is closely associated with water sources. Home range sizes for adult does are estimated to be 0.3 to 1.2 square miles, but bucks may roam up to 4 square miles or more.



designations would be carried forward under this alternative. Management prescriptions are proposed for the new ACECs that would help to ensure the protection of the relevant and important values of the ACECs, through higher levels of restrictions on public land allocations and uses.

Like Alternative B, this alternative proposes special management prescriptions for an approximately 87,000 acre area of public lands, informally labeled by BLM as the Bull Valley Mountains Multi-Species Management Area, to protect crucial habitat and migration corridors for mule deer, other wildlife species, and diverse predators in northwestern Washington County.

As under Alternative B, mountain biking area designations would be removed and acres designated as “Open” for cross-country motorized OHV travel would be reduced to comply with federal regulations and BLM’s Travel and Transportation Management guidance. Alternative C would designate the highest amount of acreage, 385,033 acres, of public lands in the SGFO as Limited.

**2.2.4 Alternative D**

Alternative D emphasizes a broader array and higher levels of public use and access, while still meeting the mandates of “conservation, protection, and enhancement” of resource values in the two NCAs. It emphasizes diverse and sustainable recreation uses of the two NCAs through the development of new, non-motorized trails and visitor facilities. Public lands within the NCAs would continue to be available for livestock grazing (Photo 2-6). Corridors would be retained or designated to accommodate new utility and/or transportation ROWs. Cultural and paleontological resources would be managed for conservation, scientific research, and public use. In the Beaver Dam Wash NCA, an Old Spanish National Historic Trail Management

Corridor is proposed and management actions are identified to conserve, protect, and restore trail resources, associated settings, and primary uses within that corridor. Like Alternatives B and C, this alternative emphasizes environmental education outreach, interpretation, and scientific research.

The Amendment to the SGFO RMP addresses OPLMA’s mandate related to biological conservation through the retention of eight existing ACEC designations and special management prescriptions for an approximately 87,000 acre area of public lands, labeled by BLM as the Bull Valley Mountains Multi-Species Management Area, to protect crucial habitat and migration corridors for mule deer, other wildlife species, and diverse predators in northwestern Washington County.

Mountain biking area designations would be removed and acres designated as “Open” for cross-country motorized OHV travel would be reduced when compared to Alternative A (No Action), to comply with federal regulations and BLM’s Travel and Transportation Management guidance.

Photo 2-6 Alternative D Proposes to Retain Livestock Grazing in the NCAs



“If you’re riding ahead of the herd, take a look back every now and then to make sure it’s still there.”  
–Will Rogers, Cowboy & Humorist, 1879-1935

**2.2.5 The Preferred Alternative**

A requirement for BLM land use planning processes is that a preferred alternative be identified in the draft RMPs. Alternative B represents the preferred alternative for the new Beaver Dam Wash and Red Cliffs NCA RMPs and for the Amendment to the SGFO RMP. The preferred alternative balances resource protection with compatible public uses. This alternative reflects an effort to identify an optimum course of action to conserve, protect, enhance, and restore values in the NCAs (Photo 2-7). Issues considered by BLM during the development of the preferred alternative included concerns identified by the public through scoping; specific environmental values, resources, and resource uses; opportunities to resolve resource conflicts, and relevant federal laws, regulations, and the planning criteria for this process.

The SGFO RMP Amendment addresses two issues that resulted from the passage of OPLMA in 2009. OPLMA at Section 1979 mandated BLM to identify areas of public land where biological conservation is a priority and undertake activities to conserve and restore plant and animal

species and natural communities. This legislative direction would be accomplished under Alternative B, through four new ACEC designations for threatened or endangered species and the retention of eight existing ACECs. It would also be accomplished through the identification of special management for the 87,000 acre Bull Valley Mountains Multi-Species Management Area, to protect crucial habitat and migration corridors for mule deer, other wildlife species, and diverse predators in northwestern Washington County. This alternative would also modify current OHV area designations, to comply with federal regulations and BLM’s Travel and Transportation Management guidance.

**2.2.6 Alternatives Considered but Eliminated From Detailed Study**

**2.2.6.1 Designating new ACECs within Beaver Dam Wash and Red Cliffs NCAs**

Pursuant to FLPMA at Sec. 202 (c) (3), BLM is to give priority to the designation of ACECs to direct special management attention, through land use restrictions and management prescriptions, to ensure that the relevant and important values of each ACEC are protected. Two

Photo 2-7 The Northern-Most Population of Joshua Trees in Utah, Located in the Beaver Dam Wash NCA, is an Important Resource Value



“Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children’s children.”  
–Theodore Roosevelt, 26th President of the United States, 1858-1919



nominations were received from the public recommending that new ACECs be administratively designated in the Beaver Dam Wash and Red Cliffs NCAs, through the current RMP process. These nominations identified the federally-listed Mojave desert tortoise as the relevant and important resource value for which ACEC designation would be warranted for the public lands within the NCAs (Photo 2-8). (The reader is referred to Appendix E for the Evaluation Report for ACECs, to review BLM’s evaluation of all nominations received during this planning process).

In furtherance of the multi-resource conservation purposes for which the two NCAs were Congressionally-designated in 2009, OPLMA Section 1974 and 1975, put in place withdrawals, segregations, and limits on specific uses of the public land that could be authorized in the NCAs. These mandates, in concert with other federal laws, regulations, and agency policies, provide a high level of protection for all resource values in the NCAs. The administrative designation of new ACECs (and the retention of existing ACEC designations) within the NCAs would be duplicative and provide no higher standard of resource protection than what is currently afforded by Congressional designation. According to BLM policy, as stated in *BLM Manual 1613-Areas of Critical Environmental Concern* (release 1-1541, 9/29/88): “If, however, the management attention provided under the Congressional designation is adequate to protect a resource or value, it is not necessary or appropriate to designate it as an ACEC” (BLM Manual 1613.51).

For these reasons, administratively designating new ACECs or retaining existing ACECs in the two NCAs were not carried forward as alternatives in this planning process.

2.2.7 Adaptive Management

Adaptive management is a formal, systematic, and rigorous approach to learning from the results of management actions, accommodating change, and improving management. It involves synthesizing existing knowledge, exploring alternative actions, and making explicit forecasts about their results. Management actions and monitoring programs are carefully designed to generate reliable feedback and clarify the reasons underlying results. Actions and objectives are then adjusted based on this feedback and improved understanding to continue to try to achieve the desired future conditions. In addition, decisions, actions, and results are carefully documented and communicated to others, so that knowledge gained through experience is passed on, rather than lost when individuals move or leave the organization.

Secretary of the Interior Order Number 3270 calls for BLM and other Department of the Interior bureaus to incorporate adaptive management principles into management plans and programs. The Secretarial Order also directs that *Adaptive Management: The U.S. Department of the Interior Technical Guide* (USDOI 2007) serve as the technical basis for implementing adaptive management programs.

Adaptive management recognizes that ecosystems are very complex and understanding of their processes and responses to management actions is limited. Thus, the greatest hurdle to overcome in implementing effective restoration and other management actions is uncertainty regarding their effectiveness. Adaptive management acknowledges that there are incomplete data when dealing with natural resources and that through continued research and monitoring of management practices, new information will be collected (Photo 2-9 and Photo 2-10). This new information is evaluated, and a determination is made whether to adjust

Photo 2-8 Mojave Desert Tortoise on Fringe of St. George Metropolitan Area, Red Cliffs NCA



the strategy accordingly to improve success in meeting plan objectives.

As the Technical Guide points out, adaptive management is only warranted when all of the following criteria can be met:

- ▶ There is a need to take action in the face of uncertainty;
- ▶ There is an opportunity to apply learning;
- ▶ The objectives of management are clear;
- ▶ The value of reducing uncertainty is high;
- ▶ Uncertainty can be expressed in a set of competing testable models;
- ▶ A monitoring program design can be put in place with a reasonable expectation of reducing uncertainty.

The ecosystems of both NCAs meet all of the above-listed criteria, as they are complex and highly variable systems whose natural conditions have been altered by past land uses. Although some research has been conducted, and monitoring of resource values is ongoing, there is still a relatively high level of uncertainty about the effects of various management treatments for increasing native plant cover or restoring at risk species habitats, as

Photo 2-9 Mojave Desert Tortoise with GPS Tracker for Research



Photo 2-10 Tortoise Den Marked for Research, Beaver Dam Wash NCA



“Know or listen to those who know.”  
–Baltasar Gracian, Philosopher, 1601–1658

“I can’t change the direction of the wind, but I can adjust my sails to always reach my destination.”  
–Jimmy Dean, Country Singer and Businessman, 1928–2010



examples. In this chapter, the objectives or “desired future conditions” for various natural resource values are identified, as well as management actions intended to conserve, protect, enhance, and restore ecosystems to meet those objectives. The predicted outcomes of implementing planned actions and the uncertainty/assumptions associated with their implementation are discussed in Chapter 4 (Environmental Consequences). Monitoring (Photo 2-11) is an important component of RMP implementation and will be used to gauge the effectiveness of actions at achieving the objectives. The RMPs also call for continued support of scientific research that furthers the understanding of natural processes and complex ecosystems.

The RMPs envision applying adaptive management principles within the framework of the Technical Guide. However, adaptive management does not give BLM managers an “open book” to implement any action necessary to achieve plan objectives. If a proposed approach is outside of the scope of the alternatives evaluated in the draft RMPs, a plan amendment and additional NEPA analysis could be required.

2.2.8 Format of Alternatives

For each alternative, BLM established goals and objectives for management and identified the management actions and allowable uses necessary to achieve those desired outcomes. Because RMPs are broad in scale, site-specific implementation-level decisions are typically made after the RMP is adopted. In some cases, however, these implementation-level decisions are included within the alternatives. Where implementation-level decisions are included in the alternatives, they are grouped together at the end of the applicable table.

For the purposes of this planning effort, goals, objectives, and management actions are defined as follows:

Goals—describe broad direction and desired conditions for each resource or resource use. The goals stay the same for all alternatives. Goals are derived from OPLMA, FLPMA, other federal laws, regulations, and policy guidance, as well as input from public scoping.

Objectives—describe more detailed outcomes or “desired future conditions” for different components of the resource or resource use that meet the overall goals.

Management Actions—describe efforts that BLM managers anticipate taking to

achieve the objectives, relying on the best available science. As new information or technologies become available, certain management actions may be added, modified, or discontinued, using an adaptive management approach. Any modified or new actions would be consistent with the RMP goals and objectives. Also, if new information shows that an action conflicts with an objective, then that action would be discontinued. In other words, the objectives take precedence over the actions in this adaptive approach.

Some of the management actions and decisions identified in the RMPs for the two NCAs and Amendment to the SGFO RMP would be put into effect as soon as the Records of Decision are signed; others may require several years to fully implement. Following approval of the NCA RMPs, an implementation strategy will be developed to establish priorities, timelines, and funding needs.

2.2.9 Types of BLM Decisions

2.2.9.1 Land Use Plan Decisions

Land use plan (RMP) decisions represent the desired outcomes and the actions needed to achieve them. Such decisions were attained using the planning process found in 43 CFR 1600 and guide future land management actions and subsequent

site-specific implementation decisions. When presented to the public as proposed decisions, land use plan decisions can be protested to the BLM Director; however, they are not appealable to the Interior Board of Land Appeals (IBLA).

Administrative Special Area Designations

Administrative designations, made by the BLM, are considered special area designations and are made in the land use planning process. These include the designation of ACECs, Outstanding Natural Areas, Research Natural Areas, and other areas requiring special management. Other administrative designations that are statutorily authorized to the Secretary of the Interior may have already been designated within the planning area or may be recommended for designation through BLM’s land use planning process. Examples of Secretarial designations made by other Interior bureaus for lands outside their jurisdiction include National Historic and Natural Landmark designations that are made by the National Park Service (NPS); the Joshua Tree National Natural Landmark (Photo 2-12), located within Beaver Dam Wash NCA, is a Secretarial designation that was made by the NPS in 1966. The draft

Joshua Tree

*Yucca brevifolia* is endemic to the Mojave Desert. It’s spectacular flowers appear infrequently, only in years when moisture and temperatures are favorable. Flowers are pollinated by a single species of yucca moth, which feeds exclusively on the Joshua tree.

Photo 2-11 BLM Staff Performing Cave Monitoring Activities



Photo 2-12 Joshua Tree Bloom, Joshua Tree National Natural Landmark



“When we tug at a single thing in nature, we find it attached to the rest of the world”  
—John Muir, Naturalist, 1838–1914



“There is no decision that we can make that doesn’t come with some sort of balance or sacrifice.”  
–Simon Sinek, Author, 1973–

RMP for Beaver Dam Wash NCA makes recommendations for modifications to that Secretarial designation, through this planning process.

Land Use Allocations

Land use allocations (Photo 2-13) are land use plan-level decisions that set apart geographic areas for specific resources or uses, such as areas where wildland fire use is not desired, where ROWs would be granted for utilities development, or where livestock grazing will be authorized. Allocations have geographic boundaries and are represented by polygons on the included maps. The management of allocated resources is described through the decisions proposed under the four alternatives.

2.2.9.2 Implementation Decisions

Implementation or activity-level decisions are management actions tied to a specific location. These are decisions that take action to implement land use plan decisions and are generally appealable to the IBLA under 43 CFR 4.410. Implementation decisions generally constitute BLM’s final approval to allow on-the-ground actions to proceed. These types of decisions require appropriate

site-specific planning and NEPA analysis. They may be incorporated into implementation plans (activity or project plans) or may exist as stand-alone decisions.

Unlike land use plan decisions, implementation decisions cannot be protested to the BLM Director under the planning regulations. Instead, implementation decisions (Photo 2-14) are subject to various administrative remedies, particularly appeals to the IBLA. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by the specific resource program regulations.

2.3 ALTERNATIVE TABLES

The following tables (Table 2-1 through Table 2-73) display potential management decisions and actions by alternative and by the three planning areas: Beaver Dam Wash NCA, Red Cliffs NCA, and those areas of the SGFO affected by the Amendment to the current RMP. Unless otherwise noted, or unless there is no similar action, Alternative A (No Action) directly quotes, rather than paraphrases or updates, the goals, objectives, and management decisions from this Record

of Decision/RMP. As written, this alternative may not always clearly convey that it describes the management of resource values and public lands programs that has been ongoing since 1999. A description of the current management provides a baseline against which to compare the three new alternatives and their environmental consequences. In many instances, no similar resource decision was included in the 1999 RMP and this is reflected in the alternative tables for the two NCAs.

Acreage data in the tables and elsewhere in the draft RMPs, draft Amendment and Draft EIS are based on the best available geographic information system (GIS) data and may not meet BLM standards for accuracy or content. Different data sources and input scales may cause some misalignment of data layers that, in turn, may affect the accuracy of the data. As a rule, data are based on the Universal Transverse Mercator (UTM) Zone 12 projection referencing the North American Datum (NAD) of 1983.

“Many of the great achievements of the world were accomplished by tired and discouraged men who kept on working.”  
–Brigham Young, 2nd President of The Church of Jesus Christ of Latter Day Saints, 1801–1877

Photo 2-13 Land Use Allocation: Proposed Visual Resource Management Class III in the Beaver Dam Wash NCA



Photo 2-14 Implementation Decision: Restoration of the Orson B. Adams House in the Red Cliffs NCA





2.3.1 Beaver Dam Wash NCA Alternative Tables

Table 2-1 Air Quality

Table 2-1 Air Quality			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Federal and state air quality standards are met in the NCA.		
Objectives			
BLM’s objective for airshed management will be to ensure that authorizations granted to use public lands and BLM’s own management programs will comply with and support local, state, and federal laws, regulations, and implementation plans pertaining to air quality.	Air quality is improved by reducing windblown dust levels from motorized vehicle travel on unpaved roads and from the loss of vegetative cover to wildfires.  Short-term air quality impacts (e.g., smoke, haze, windblown dust) that result from wildfires are minimized through appropriate fire suppression responses and through proactive management to minimize the potential for future wildfires.  Research that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect air resources and climate change is supported.		
Management Guidance Common to All Alternatives			
Apply Best Management Practices (BMPs) and other site-specific mitigation measures to maintain soil stability, protect physical and biological (cryptogamic) soil crusts, and minimize wind erosion of soils (refer to Appendix F for BMPs for all programs and resources).			
Management Actions			
All BLM actions and use authorizations will be designed or stipulated so as to protect the high-quality airshed within Zion National Park and other Class I areas in the region and to otherwise minimize impacts to visibility.	Reclaim closed routes that are not required for administrative purposes, non-motorized recreational uses, or as fire breaks. Use appropriate methods on reclaimed routes (e.g., soil binders, vertical mulching) to minimize windblown dust until vegetative cover has been restored.  Use aggregate, gravel base, or other environmentally-acceptable soil binders, as needed, at major trailheads, waysides, and high-use recreation sites, and on BLM-maintained roads to minimize windblown dust.  Coordinate with Washington County Public Works Department to post speed limits on unpaved roads, as needed, to lessen windblown dust created by motorized vehicle travel.  Implement post-wildfire Emergency Stabilization and Rehabilitation (ES&R) actions that will stabilize soils and re-establish vegetative cover to minimize windblown dust levels.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to minimize new surface disturbances that would contribute to increased soil erosion and windblown dust.		
Scientific Research			
No similar action.	Pursue opportunities to install air quality monitoring equipment and collect data on ozone levels, visibility (haze) and other appropriate air quality indicators through federal and non-federal grants; partnerships with other federal agencies, state, tribal and local governmental entities, academic institutions, and private entities; and through cooperative agreements or other appropriate methods.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to install one or more solar-powered weather stations in the NCA to collect data on temperature, precipitation, wind speed, humidity, soil moisture, solar radiation, and other variables that could signal changing climatic conditions.  Pursue opportunities for scientific studies to determine the carbon sequestration value of intact desert shrublands and the potential of degraded desert shrubland restoration to mitigate increasing atmospheric carbon dioxide levels that are contributing to global warming.		



Table 2-2 Water Resources

Table 2-2 Water Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Water resources are conserved and protected to fulfill the purposes of the NCA and sustain ecosystem resiliency under changing climatic conditions.		
<b>Objectives</b>			
<p>BLM’s objectives for soil and water resources will be to work with municipalities, state and local agencies, and other interested parties to:</p> <p>a) Protect community water-sheds and sources of culinary water;</p> <p>b) Reduce erosion, stream sedimentation, and salinization;</p> <p>c) Improve water quality in streams and rivers;</p> <p>d) Promote water conservation;</p> <p>e) Ensure compliance with state and federal laws pertaining to water quality and pollution prevention;</p> <p>f) Ensure water availability for the maintenance of key natural systems and human enjoyment;</p> <p>g) Where necessary to meet essential community needs, identify environmentally suitable sites for water storage and routes for water transport.</p> <p>BLM will comply with the provisions of Executive Orders 11988 and 11990 that require federal agencies to protect wetlands under their jurisdiction and avoid development within floodplains wherever possible.</p>	<p>Surface water quality is suitable for appropriate beneficial uses, complies with approved federal and state standards, and meets or exceeds the applicable Utah Standards and Guides (Appendix D).</p> <p>Salinity and sediment loads in the Beaver Dam Wash do not increase as a result of land uses and authorized activities on public lands in the NCA.</p> <p>Research is supported that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect water resources (e.g., fire cycles, vegetation succession) and that may influence climate change.</p>		
<b>Management Guidance Common to All Alternatives</b>			
<p>Apply BMPs and other site-specific mitigation measures to maintain soil stability, minimize wind and water erosion, and ensure that surface disturbances do not cause accelerated sedimentation in surface water sources. Inspect construction-related equipment and vehicles for petroleum and other chemical leaks when they arrive on-site.</p> <p>Implement post-fire ES&amp;R actions to restore riparian vegetation and minimize soil erosion that could impair water quality in springs, seeps, and in Beaver Dam Wash. In planning re-vegetation projects for disturbed or fire-damaged riparian areas, identify specific resource and management objectives, desired plant communities, and methods that are ecologically</p>			

Table 2-2 Water Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
sustainable, likely to achieve desired outcomes, and that minimize new surface disturbances and impacts on other resource values of the NCA.			
Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments in meeting management objectives. Conduct monitoring, as determined by the project-specific monitoring plans, to evaluate effectiveness of re-vegetation and ES&R actions.			
Monitor water quality in Beaver Dam Wash to determine if the designation standard for beneficial uses established by the Utah Division of Water Quality (UDWQ) is being met.			
Management Actions			
BLM will coordinate with local and state agencies as water protection plans are developed to ensure that federal land management actions or practices do not jeopardize drinking water quality.  Meet the goals of the Colorado River Basin Salinity Control Act by implementing administrative actions in this Plan and continuing to prevent the movement of salts into drainages and waterways that flow into the Virgin River or its tributaries.	Pursue acquisition of non-federal lands from willing sellers within the NCA that would benefit the conservation and protection of surface and groundwater resources.  Pursue acquisition of surface and groundwater rights from willing sellers to benefit the conservation and protection of wildlife and improve aquatic habitats and riparian resources.  Do not authorize land uses that would export water from the NCA.  Work through the State of Utah’s water rights system to ensure that BLM obtains water rights on all inventoried point water sources (springs, seeps, wells, reservoirs, etc.) for authorized beneficial uses of water within the NCA, including wildlife, recreation, domestic use within visitor facilities, and the improvement of aquatic habitats and riparian resources.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to protect water quality in streams, springs, seeps, and associated riparian areas.		
Scientific Research			
No similar action.	Inventory the NCA to locate all springs and seeps, map the areal extent of associated riparian vegetation, evaluate water quality and flow rates, and document all spring developments.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to develop a conceptual groundwater model of quantity recharge of springs, seeps, and surface flows within and adjacent to the NCA.  Pursue opportunities to collect data and monitor changes in precipitation patterns (e.g., timing, frequency, intensity of events) that are predicted to alter surface and ground water quantity and availability.		



Table 2-3 Geologic and Paleontological Resources

Table 2-3 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Paleontological resources, unique geologic features, and examples of geologic processes are conserved and protected for the benefit and enjoyment of present and future generations, consistent with the mandates of OPLMA and the legislative purposes for which the Beaver Dam Wash NCA was Congressionally-designated.		
<b>Objectives</b>			
In managing cultural and paleontological resources on public lands, BLM will seek to:  a) Employ reasonable measures and land use controls needed to reduce impacts from urbanization and human encroachment;  b) Apply the principles of conservation management to selected areas to maintain such resources in their present condition for future study and enjoyment;  c) Reduce looting and vandalism through increased public education, surveillance, and enforcement;  d) Provide for legitimate field research by credible scientists and institutions,  e) Ensure compliance with applicable state and federal laws for consultation, assessment, and mitigation including consultation with interested or affected Indian tribes;  f) Provide for stabilization, maintenance, and interpretation of selected sites for public enjoyment and education.	Scientifically important paleontological and geological resources are identified, managed, and allocated to appropriate uses that increase knowledge about geological processes and the history of life on Earth.  Designate paleontological resources currently documented or projected to occur in the NCA to Use Allocations (as defined by <i>BLM Manual Section 8110.42 and Land Use Planning Handbook H-1601-1</i> ). Focus on the Use Allocations that are consistent with the legislative mandate from OPLMA for the NCA: Scientific Use, Conservation for Future Use, and Public Use. Do not allocate resources of scientific interest to Traditional Use, Experimental Use, or Discharged from Management, as these would not be consistent. See <b>Table 2-4</b> for descriptions of each Use Allocation category.		
<b>Management Guidance Common to All Alternatives</b>			
Regular monitoring patrols and condition assessments are conducted at fossil localities in the NCA by BLM staff and trained volunteer Site Stewards.			
No commercial sale or use of petrified wood is permitted in the NCA.			
<b>Management Actions</b>			
No similar action.	Conduct paleontological surveys in areas with high potential for scientifically important fossil localities (Potential Fossil Yield Categories classes 3, 4, and 5).		

Table 2-3 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Allocate and manage 100% of vertebrate and paleo-botanical sites for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of vertebrate and paleo-botanical sites for Scientific Use and Conservation for Future Use.	Same as Alternative B.
No similar action.	Allocate and manage 100% of invertebrate fossil localities for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of invertebrate fossil localities for Scientific and Conservation for Future Use.	Same as Alternative B.
No similar action.	Authorize the use of hand tools by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits to conduct site-specific paleontological field studies and specimen collections at localities allocated to Scientific Use and Conservation for Future Use.		
No similar action.	Authorize the use of mechanized equipment on a case-by-case basis by researchers holding valid NCA Scientific Research Permits or BLM Paleontological Resource Use Permits.  Resources Excavation Permits to conduct site-specific paleontological field studies and specimen collections at localities allocated to Scientific Use and Conservation for Future Use.	Do not authorize the use of mechanized equipment for geological and paleontological field studies.	Same as Alternative B.
No similar action.	Prohibit the collection of common invertebrate fossils for commercial or personal use.	Same as Alternative B.	Allow the casual collection of reasonable amounts of common invertebrate specimens for personal use, either by surface collection or the use of non-powered hand tools that result in negligible surface disturbance.
The collection of petrified wood on public lands is limited to 250 pounds per person per year for personal use only. No commercial use will be permitted to avoid the rapid depletion of the resource.	Prohibit the collection of petrified wood for personal use (as defined by federal regulations in 43CFR 3622).	Same as Alternative B.	Allow the collection of petrified wood for personal use, consistent with federal regulations in 43 CFR 3622, either by surface collection or the use of non-powered hand tools that result in negligible surface disturbance.
No similar action.	Monitor high significance (scientific or interpretive) sites with fossil resources that are not feasible or desirable to excavate or collect to document their condition. The frequency of monitoring action for identified sites would be determined by the physical nature of the resource and potential threats. When monitoring indicates the need, management actions would be taken to conserve and protect these resources through physical measures and land use restrictions.		



Table 2-3 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Scientific Use:</i>			
No similar action.	Authorize surface collection and excavation of unique and scientifically important fossil specimens by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits.		
Conservation for Future Use:			
No similar action.	Only authorize surface collection of unique and scientifically important fossil specimens by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits if specimens are at risk of theft, vandalism, or loss to natural erosion and if feasible methods for in-situ protection are not available.  Monitor localities allocated to Conservation for Future Use on a regular basis, with monitoring frequency to be determined by the nature of the resource and potential threats.		
<i>Public Use:</i>			
No similar action.	Prior to developing a locality for public use ensure the paleontological resources at the site and in the surrounding area have been fully documented.		
No similar action.	Install informational signing and kiosks on site etiquette and the Paleontological Resource Protection Act (PARPA) at Public Use sites (e.g., trails, trailheads) where appropriate.		
<b>Public Education and Interpretation</b>			
BLM will collaborate with local communities, organizations, local and state agencies, Indian tribes, and other interested parties in developing and implementing plans for the restoration, stabilization, protection, and/or interpretation of appropriate historical, archaeological, or paleontological sites and resources on public lands in Washington County.	Develop on and off-site interpretation for significant paleontological sites and specimens, and geological features to foster an appreciation for the unique nature of these resources.  Develop on and off-site interpretation for areas within the NCA where the geologic history of southwestern Utah can be observed and appreciated.  Support education outreach programs, activities, and volunteer opportunities that focus on paleontological resources and the geologic history of Earth.  Promote opportunities for volunteer involvement in Site Stewardship that increase public awareness of the need to conserve and protect at-risk fossil resources.  Promote opportunities for volunteer involvement in inventory and data recovery projects that enhance public understanding of the geologic and paleo-environmental history of the NCA.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities to conduct field inventories and increase the fossil locality database for the NCA in partnership with the Utah Geological Survey, natural history museums, academic institutions, avocational groups, and trained volunteers.  Recruit and train youth and veteran groups, citizen stewards, and other volunteers to participate in inventory and data recovery projects that enhance public understanding of the earth history of the NCA.		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities for scientific research studies at sites allocated to Scientific Use that collect paleo-environmental data that could serve as a baseline for comparison with modern climate trends.		

Table 2-4 Use Allocation Categories

Table 2-4 Use Allocation Categories		
Use Allocation Categories	Management Action	Desired Management Outcome
Scientific Use	Permit appropriate research	Resource preserved until research potential or data recovery potential realized
Conservation for Future Use	Protective measures; special administrative designations	Resource preserved until conditions for use are met
Public Use	Determine appropriate public uses	Resource preserved long term, with on-site interpretation
Traditional Use	Determine limitations on uses, in consultation with culturally affiliated American Indian Tribes	Resource preserved long term



Table 2-5 Cave and Karst Resources

Table 2-5 Cave and Karst Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Cave and karst resources are conserved and protected for the benefit of present and future generations.		
<b>Objectives</b>			
No similar action.	Caves and karst resources are evaluated for significance, pursuant to the Federal Cave Resources Protection Act, and managed for appropriate uses such as conservation, scientific, recreational, and educational uses.		
<b>Management Guidance Common to All Alternatives</b>			
As needed, implement National White Nose Syndrome Decontamination Protocol and BLM IM 2010-181 in the management of cave resources.			
<b>Management Actions</b>			
No similar action.	Initiate systematic inventories in areas of the NCA with high potential for cave and karst resources.		
No similar action.	Evaluate newly identified cave and karst resources for significance under the criteria defined in the Federal Cave Resources Protection Act and 43 CFR Part 37. Propose significant caves and karst resources for inclusion in the National Cave System.		
No similar action.	Manage cave and karst resources evaluated as significant for Conservation for Future Use, Scientific Use, and Public Use.	Manage cave and karst resources evaluated as significant for Conservation for Future Use and Scientific Use.	Same as Alternative B.
No similar action.	Develop implementation-level Cave Management Plans for significant cave and karst resources that are identified for Public Use to identify appropriate management objectives and actions needed to protect resource values.	No similar action.	Same as Alternative B.
<b>Public Education and Interpretation</b>			
No similar action.	Develop on-site interpretation for significant cave and karst resources that are managed for Public Use.	Develop off-site interpretation for significant cave and karst resources that are managed for Conservation for Future Use and Scientific Use.	Same as Alternative B.
<b>Scientific Research</b>			
No similar action.	Authorize scientific research in cave and karst resources that do not contain cultural or paleontological resources through NCA Scientific Research Permits. Where cultural or paleontological resources are present, authorize scientific research through permits issued under the legal authorities of PARPA and the Archeological Resources Protection Act (ARPA).		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities for scientific research studies to collect data on cave biota and geologic processes that could serve as a baseline for comparison with modern climate trends.		

Table 2-6 Soil Resources

Table 2-6 Soil Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Soil resources function to sustain the ecological health, species biodiversity, and resilience of native vegetation communities and watersheds.		
<b>Objectives</b>			
BLM’s objectives for soil and water resources will be to work with municipalities, state and local agencies, and other interested parties to:  a) Protect community watersheds and sources of culinary water;  b) Reduce erosion, stream sedimentation, and salinization;  c) Improve water quality in streams and rivers;  d) Promote water conservation;  e) Ensure compliance with state and federal laws pertaining to water quality and pollution prevention;  f) Ensure water availability for the maintenance of key natural systems and human enjoyment;  g) Where necessary to meet essential community needs, identify environmentally suitable sites for water storage and routes for water transport.	Native vegetation communities provide sufficient plant cover and litter accumulation to protect soils from wind and water erosion.  Soils exhibit infiltration and permeability rates that are appropriate to specific soil types, land forms, and climatic variables.  Soil crusts are conserved, protected, and restored to perform vital functions such as enhancing infiltration, maintaining soil stability, and facilitating plant growth or re-establishment.  Salinity and sediment contributions from public lands into the Colorado River system, via Beaver Dam Wash to the Virgin River, are minimized through appropriate land use management.  Research is supported that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect soil and vegetation resources (e.g., fire return, nutrient cycles) and that may influence climate change.		
<b>Management Guidance Common to All Alternatives</b>			
Apply BMPs and other site-specific mitigation measures to maintain soil stability, minimize wind and water erosion, and ensure that surface disturbances do not cause accelerated wind or water erosion.  Implement post-fire ES&R actions designed to minimize soil erosion and facilitate re-vegetation of desired native plant communities.			
<b>Management Actions</b>			
Meet the goals of the Colorado River Basin Salinity Control Act by implementing administrative actions in this Plan and continuing to require the use of BMPs in areas of highly erodible, saline soils to reduce or prevent the movement of salts into	Minimize damage to or loss of top soil and soil crusts through project design, permit stipulations, and public education.  Locate new trails, trailheads, or other facilities on soils suitable for development, such as areas less prone to wind and water erosion and previously disturbed areas.		



Table 2-6 Soil Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
drainages and waterways that flow into the Virgin River or its tributaries.			
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public land use etiquette to protect soils and soil crusts.		
Scientific Research			
No similar action.	Pursue opportunities to complete detailed soil surveys and ecological site inventories in the NCA.  Pursue opportunities for scientific studies relating to soil crust function and regeneration in disturbed and fire-altered desert ecosystems.  Pursue opportunities for scientific studies that focus on developing cost-effective methods to restore biological (cryptogamic) soil crusts in disturbed and fire-altered desert ecosystems.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to collect data and monitor changes in the timing, frequency, and intensity of storms, flood events, and droughts and the effects of these climatic changes on soil crust function and regeneration.		

Table 2-7 Native Vegetation Communities

Table 2-7 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
CONSERVATION AND PROTECTION OF NATIVE VEGETATION COMMUNITIES			
Goal			
	Biodiversity, ecological integrity, and ecosystem resilience are conserved, protected, and re-stored in the unique native vegetation communities created by the convergence of the Mojave Desert and Great Basin ecoregions.		
Objectives			
BLM’s overall objective for vegetation management will be to ensure that the amount, type, and distribution of vegetation on public lands in Washington County reflects desired plant communities. These are defined as plant communities that produce the kind, proportion, and amount of vegetation necessary to meet or exceed management objectives for a given ecological site. Development of such communities will sustain a desired level of productivity for wildlife, livestock, and nonconsumptive purposes while maintaining properly functioning ecological conditions. BLM will apply Utah Standards for Rangeland Health and Guidelines for Grazing Management (SGFO RMP Appendix 3) in managing its various resource programs and monitor the results to ensure vegetation management objectives are being met. Collaboration with affected operators, government agencies, Indian tribes, and interested organizations will be promoted to bring together resources needed to complete specific management plans, implement approved recommendations, and monitor and evaluate the results.	Native perennial and annual communities exhibit species diversity, suitable canopy cover, plant density, and age class diversification appropriate to each ecological site type.  Desired plant communities provide sufficient plant cover and litter accumulation to protect soils from wind and water erosion and to enhance nutrient cycling.  Loss of late-successional desert shrublands (e.g., creosote-bursage, blackbrush communities), perennial understory vegetation, and soil crusts to wildfires is minimized through management actions to prevent wildfires, suppress wildfires, and control or eradicate non-native invasive annual grass species ( <i>Bromus</i> spp.).  Resilience of native plant communities to climate change is maintained by re-introducing native species that have been lost or by introducing other appropriated native species.  Connectivity of native plant communities is maintained by restoring closed roads and other linear features that interrupt species dispersal.  Genetic integrity of native communities is protected by using source-identified seed and other plant materials for restoration and re-vegetation projects.  Research is supported that increases the understanding of ecosystem processes (e.g., vegetation succession), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., livestock grazing, recreation) that affect vegetation communities and that may influence climate change.		



Table 2-7 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Management Guidance Common to All Alternatives</b>			
Manage land uses and authorized activities to ensure that ecological systems meet or exceed management objectives identified in the Utah Standards and Guides (Appendix D).			
Apply BMPs and other management techniques designed to minimize impacts on native vegetation communities for all land uses and authorized activities.			
<b>Management Actions</b>			
<i>Native Vegetation Communities Conservation:</i>			
No similar action.	Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.		
<i>Native Vegetation Communities Protection:</i>			
Site specific plans to identify desired plant communities, establish specific management objectives, and recommend practices to be employed to achieve desired results, where appropriate, will be prepared in collaboration with affected livestock operators, the Utah Division of Wildlife Resources (UDWR), the Washington County Water Conservancy District, and other interested parties, agencies, or organizations.	Implement landscape-level fuel breaks and hazard fuel reduction projects on the Beaver Dam Slope in partnership with adjacent federal and state land managing agencies in Utah, Arizona, and Nevada.  Design fuel breaks and hazard fuel reduction projects to conserve and protect unburned native vegetation communities, evaluating factors such as vegetation types, seasonal wind direction, and expected fire behavior in project planning.  Design fuel breaks to incorporate topographic features, water courses, major ephemeral drainages, road networks, and utility corridors, to minimize new surface disturbances and the loss of native vegetation.  Design fuel breaks and hazard fuel reduction projects to utilize those methods that are environmentally sensitive and minimize new surface disturbances.  Employ appropriate wildfire suppression tactics to minimize loss of unburned and once-burned native vegetation communities, particularly late-successional desert shrublands.		
“Fire management actions would include full suppression, mechanical non-fire fuel treatments, and prescribed fire. Because of the suppression emphasis, the appropriate management response (AMR) would be applied to generally keep fire sizes small and fire would not play a large role in resource enhancement” (BLM UT-040-04-054 2005).	Authorize the use of biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).	Authorize the use of hand removal, low impact mechanical methods, or a combination of these methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).	Authorize the use of biological controls, flaming, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to protect native vegetation communities and prevent wildfires.		

Table 2-7 Native Vegetation Communities	
Alternative A (No Action)	Alternative B Alternative C Alternative D
<b>Scientific Research</b>	
No similar action.	<p>Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in areas to be re-vegetated. In corporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.</p> <p>Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.</p> <p>Pursue opportunities to conduct inventories for unique or rare plants and “hanging gardens” in the limestone formations of the Beaver Dam Mountains.</p> <p>Pursue opportunities for scientific studies that evaluate the long term effectiveness of herbicidal treatments for exotic invasive annual grasses in arid ecosystems.</p> <p>Pursue opportunities for scientific studies to develop ecologically sustainable and cost-effective biological treatments to control and eradicate noxious weeds and non-native invasive annual grasses in arid ecosystems.</p>
<b>Climate Change Monitoring</b>	
No similar action.	<p>Monitor the timing, frequency, and intensity of fall precipitation events in the NCA, as these events can be used to predict high invasive annual grass production in the following spring that will fuel catastrophic wildfires during the summer months.</p> <p>Resample vegetation study plots and monitoring transects established in the 1970s to determine if native plant species are shifting their elevational distribution in response to climate change.</p>
<b>RIPARIAN VEGETATION</b>	
<b>Goal</b>	
	Riparian areas sustain productive and diverse ecosystems and properly functioning watersheds.
<b>Objectives</b>	
BLM’s objective, to the extent practical, will be to manage riparian areas so as to maintain or restore them to properly functioning conditions and to ensure that stream channel morphology and functions are appropriate to the local soil type, climate, and landform.	<p>Healthy riparian areas are conserved and protected through land use restrictions, protective measures, and other management actions.</p> <p>Healthy riparian areas exhibit appropriate species composition and structural diversity to provide suitable forage, nesting or breeding habitats, and cover for diverse terrestrial and aquatic wildlife.</p> <p>Degraded riparian areas are restored to proper functioning condition or better, ensuring that stream channel morphology and functions are appropriate to the local soil type, climate, and landform.</p> <p>Employ the best available science relating to natural recovery patterns of riparian communities in arid lands.</p> <p>Research is supported that increases the understanding of ecosystem processes (e.g., vegetation succession), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., livestock grazing, recreation) that affect riparian vegetation communities and that may influence climate change.</p>



Table 2-7 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Management Guidance Common to All Alternatives</b>			
Manage land uses and authorized activities to ensure that riparian areas meet or exceed management objectives identified in the Utah Standards and Guides (Appendix D).			
Employ appropriate wildfire suppression tactics to minimize impacts on riparian areas, while protecting firefighter and public safety and private property as first priorities.			
Apply BMPs and other management techniques designed to minimize impacts on riparian areas that may result from land uses and authorized activities.			
<b>Management Actions</b>			
<i>Riparian Vegetation Conservation:</i>			
Monitoring studies will be established in riparian areas where increased recreation, OHV use, or grazing patterns are believed to be adversely impacting goals for riparian management. Impacts on key riparian species will be monitored...as resource conditions warrant and priorities allow. Regular monitoring of species and sites will be conducted to determine whether vegetative conditions and objectives are being achieved. If declining trends are identified, BLM will work with livestock operators, user groups, and other affected agencies, communities, or organizations to identify causes of the declining trends and to recommend and take corrective action.	Inventory riparian areas to establish baseline data on functioning conditions, trends in native plant composition, and infestations of noxious weeds and invasive species.  Pursue acquisition of non-federal lands within the NCA that would benefit the conservation, protection, and restoration of riparian areas.  Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.  Develop and implement re-vegetation plans for damaged riparian areas to minimize soil erosion and re-establish desired plant communities. Plans will specify seed/plant sources, seed/plant mixes, and soil preparation. Utilize salvage vegetation from the project area to the extent possible.  Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments in meeting management objectives.  Conduct monitoring, as determined by project-specific monitoring plan, to evaluate effectiveness of restoration and ES&R treatments.		
<i>Riparian Vegetation Protection:</i>			
Options may include, but are not limited to, fencing, barriers, selected closures, vegetative manipulations, seasonal use restrictions for camping or recreation, and adjustments in grazing management.	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach using biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods, depending on target species, infestation level, site characteristics, and project size (see Table 2-8 for descriptions of each method).	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach through hand removal methods, depending on target species, infestation level, site characteristics, and project size (see Table 2-8 for descriptions of this method).	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach using biological controls, flaming, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods, depending on target species, infestation level, site characteristics, and project size (see for Table 2-8 descriptions of each method).
No similar action.	Allow adequate time between treatments for native woody species to establish in a treated area before treating adjacent patches.		

Table 2-7 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Options may include, but are not limited to, fencing, barriers, selected closures, vegetative manipulations, seasonal use restrictions for camping or recreation, and adjustments in grazing management.	Prohibit new surface disturbing projects or activities within 500 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions. This restriction does not apply to the maintenance of existing spring developments and conveyance systems.	Prohibit new surface disturbing projects or activities within 1000 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions. This restriction does not apply to the maintenance of existing spring developments and conveyance systems.	Prohibit surface disturbing projects or activities within 250 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions. This restriction does not apply to the maintenance of existing spring developments and conveyance systems.
Rangelands that have been burned, reseeded, or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows:  a) Burned rangelands, whether by wildfire or prescribed burning, will be ungrazed for a minimum of one complete growing season following the burn;  b) Rangelands that have been reseeded or otherwise chemically or mechanically treated will be ungrazed for a minimum of two complete growing seasons following treatment.	Exclude livestock from areas where riparian restoration has been implemented through rest/rotation systems, fencing, water management, temporary closure of portions or all of the allotment, or other methods that will achieve the goal of protecting the project or treatment areas from grazing impacts until identified resource goals and objectives have been met.	Public lands of the NCA are unavailable for livestock grazing over the life of the RMP.	Same as Alternative B.
Options may include, but are not limited to, fencing, barriers, selected closures, vegetative manipulations, seasonal use restrictions for camping or recreation, and adjustments in grazing management.	Temporarily close riparian restoration project areas to those land uses and authorized activities that have the potential to impact the success of the treatments until monitoring indicates that identified resource goals and objectives for these treatments have been met.		
Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas or other permanently located or other natural water sources. BLM will encourage that the locations of these supplements be moved every year.	Prohibit placement of livestock salt blocks and other nutritional supplements within 1500 feet of the edge of the riparian zone.	Public lands of the NCA are unavailable for livestock grazing over the life of the RMP.	Prohibit placement of livestock salt blocks and other nutritional supplements within 500 feet of the edge of the riparian zone.
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about the ecological values of riparian areas and appropriate public land use etiquette to protect these areas.  Involve volunteers, schools, youth groups, veterans, and partner organizations in riparian resource monitoring and restoration projects to increase public awareness and foster citizen stewardship of NCA resources.		



Table 2-7 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Research			
No similar action.	<p>Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in riparian areas to be re-vegetated. In corporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.</p> <p>Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.</p> <p>Collect and maintain baseline data on riparian vegetation species composition, noxious weeds, and non-native species infestations.</p> <p>Pursue opportunities to develop and maintain baseline data on the terrestrial, avian, and aquatic wildlife that utilize these areas.</p> <p>Pursue opportunities to develop baseline data on taxa found in the riparian areas that are not well studied, such as amphibians, insects, other invertebrates, fungi, and lichens.</p>		
Climate Change Monitoring			
No similar action.	<p>Pursue opportunities to monitor the areal extent and species composition of riparian vegetation communities as a possible predictor of decreased precipitation and changes in seasonal precipitation patterns in the Mojave Desert.</p> <p>Pursue opportunities to identify key riparian features within and adjacent to the NCA that must be protected to allow multi-species habitat connectivity and wildlife migration corridors under changing climate conditions.</p>		

Table 2-8 Vegetation Management Toolbox

Table 2-8 Vegetation Management Toolbox		
Tool	Methodology/Rationale	Possible Uses
Hand Removal	Hand pulling, hoeing, and digging out targeted individuals or groups of plants.	Hand treatment to eliminate small weed populations, to control specific weed species, and to promote restoration.
Mechanical	Mowing, weed-whipping, cutting (chainsaw), and brush removal. Good for small to medium-scale targets, possible negative impacts to habitat by equipment (such as soil compaction, creation of disturbed soils, burrow collapse).	Treatment of hazard fuels for fire control. Removal of invasive species as pretreatment before restoration seeding. Cutting to remove exotic tree species.
Flaming	Use of small, hand-held torches or flame-emitting devices to burn individual noxious weed plants or small weed infestations.	Flaming specific weed targets, as a general weed treatment.
Targeted Grazing	<p>Use of contracted grazing animals in specific settings, such as along roadways, at trailheads, to reduce hazardous fuels and weed infestations. Variables include type of livestock, timing and duration of treatment, stocking rates, and frequency.</p> <p>Applicable for small to medium target areas, can be targeted on specific weed species, and is relatively cost-effective. Possible negative impacts to native species, biological soil crusts, and to habitat (such as soil compaction, creation of disturbed soils, burrow collapse).</p> <p>Contracted domestic sheep and goats herds would not be used for targeted grazing projects where appropriate separation distances from desert bighorn herds could not be maintained. Domestic sheep and goat herds would be contained within the target area, through temporary fencing, herding, etc., and removed immediately upon completion of the contracted work.</p>	As a hazard fuel reduction method, specific weed treatments, and pretreatment for restoration seeding.
Herbicides	<p>Spraying individual plants or populations, sometimes in conjunction with stump-cutting. Spraying specific project areas.</p> <p>Good for small to large scale projects, cost-effective weed control, essential for eradication of some problematical species. Negative impacts related to potential human and ecological exposures to chemicals.</p>	Target spraying to eradicate or control exotic annuals for hazard fuel reduction or as a means to prepare areas for restoration seeding and/or outplantings with native species.
Seeding/Outplanting	<p>Hand-seeding, seeding by aerial applications and small seed drills, hand plantings of plugs or individual plants, inoculation with cryptogamic crust species or mycorrhizae.</p> <p>Good for small to large-scale projects.</p>	Hand-seeding and outplantings for small restoration projects or to introduce seed source islands within partially restored native habitat. Aerial seed applications and seeding with small drills for larger scale projects. Inoculation to restore cryptogamic crusts or help plant establishment.
Watering	Supplemental water, artificial water.	Supply water to increase success of restoration efforts, to enhance seed production and outplanting survival.
Biological Control	<p>Release of specific organisms on target populations. Good for large-scale targets.</p> <p>Possible impacts if organism shifts to new host.</p>	Release of biological control organisms to control widespread and relatively common non-native species.



Table 2-9 Fire and Fuels Management

Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>FIRE SUPPRESSION</b>			
<b>Goal</b>			
	Wildfire suppression activities support the conservation and protection of NCA resource values and comply with legal, regulatory, and agency policy requirements.		
<b>Objectives</b>			
Fire suppression on public lands in Washington County will be directed by objectives and prescriptions identified in the Dixie Fire Management Plan scheduled for completion in 1999. The highest priorities of fire suppression will be to protect life, firefighter safety, property, and critical resource values. The BLM will coordinate with stakeholders at local and regional levels as well as adjacent land management agencies in formulating and implementing the final Fire Management Plan.	Suppression activities prioritize firefighter and public safety, protect private property, conserve and protect NCA resource values, and minimize overall suppression costs through planning and efficient management of tactical and human resources.  Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that affect the fire return intervals that influence climate change.		
<b>Management Guidance Common to All Alternatives</b>			
Employ rapid and appropriate suppression responses to minimize fire size and duration in the NCA.			
<b>Management Actions</b>			
In both the Beaver Dam Slope ACEC and the Washington County HCP Reserve, BLM will suppress wildfires in accordance with the guidelines in Fighting Wildfire in Desert Tortoise Habitat: Considerations for Land Managers, (T. Duck et al, 1994 – Desert Tortoise Council; International Symposium of Wildland Fire, 1995). Generally, the guidelines call for applying the principle of “minimum tool.” Under this concept, BLM will use the least disruptive approach to initial attack and fire suppression needed to extinguish the fire and meet other resource objectives for the affected area. Qualified resource advisors will be on-site during fire suppression to guide firefighter activities so as to minimize harm	Conserve and protect unburned areas through appropriate fire suppression responses, while prioritizing firefighter and public safety and the protection of private property.  Utilize qualified Resource Advisors to guide suppression actions for all fires to help ensure that ecological systems and resource values are conserved and protected to the maximum extent possible.		

Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
to tortoises and important habitats.			
No similar action	Evaluate the use of “back-burning” as a fire suppression tactic in late successional shrublands, including Joshua tree woodlands and black-brush communities, on a case-by-case basis.  Require NCA Manager approval prior to employing this tactic.	Prohibit “backburning” as a fire suppression tactic in late successional shrublands, including Joshua tree woodlands and blackbrush communities with exceptions when it is deemed essential to protect human life, property, and the effective control of the fire.	Evaluate the use of “back-burning” as a fire suppression tactic in late successional shrublands, including Joshua tree woodlands and black-brush communities, on a case-by-case basis.  Require Resource Advisor approval prior to employing this tactic.
<i>Wildland Fire Use:</i>			
“Wildland fire use is not allowed” (BLM UT-040-04-054 2005).	Do not authorize wildfire use in the NCA, as there are no fire-adapted vegetative communities present in which fire has historically played an important role in ecosystem function.		
<i>Management-Ignited (Prescriptive) Fire:</i>			
“Fire management actions would include full suppression, mechanical non-fire fuel treatments, and prescribed fire. Because of the suppression emphasis, the appropriate management response (AMR) would be applied to generally keep fire sizes small and fire would not play a large role in resource enhancement” (BLM UT-040-04-054 2005).	Do not authorize the use of management-ignited (prescriptive) fire in any of the ecological systems of the NCA for hazard fuel reduction or vegetation type conversions, as these are not fire-adapted communities in which fire has historically played an important role in ecosystem function.  Prescriptive fire could be authorized as part of scientific studies, as described below under Scientific Research.		
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about fire prevention and reporting wildfires.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about native vegetation communities and why fire did not historically play an important role in ecosystem function for these communities.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies that will develop reliable methods to forecast catastrophic wildfire seasons using the timing of fall and winter precipitation events.		
No similar action.	Only authorize the use of prescriptive fire for research purposes as part of scientific studies authorized under an NCA Research Permit and other required permits.	Do not authorize the use of prescriptive fire for research purposes in the NCA.	Same as Alternative B.
No similar action.	Do not authorize prescriptive fires for research purposes within designated critical habitat for the Mojave desert tortoise or other federally-listed species.  Do not authorize prescriptive fires for research purposes in unburned late successional shrublands, including mesic and thermic blackbrush communities and Joshua tree woodlands.		



Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Limit the size of prescriptive fires for research purposes to no more than one acre for all studies proposed under an NCA Research Permit.	Do not authorize the use of prescriptive fire for research purposes in the NCA.	Limit the size of prescriptive fires for research purposes to no more than five acres for all studies proposed under an NCA Research Permit.
Climate Change Monitoring			
No similar action.	Pursue opportunities to install one or more solar-powered weather stations in the NCA to collect data on temperature, precipitation, wind speed, humidity, soil moisture, solar radiation, and other variables that could signal changing climatic conditions that influence wildfire frequency and severity.		
ES&R ACTIONS AND OTHER NATIVE VEGETATION COMMUNITY RESTORATION			
Goal			
	Biodiversity, ecological integrity, and ecosystem resilience are restored in disturbed and fire-damaged native vegetation communities.		
Objectives			
BLM will conduct rehabilitation of lands affected by wildfire in accordance with provisions of the approved <i>Dixie Normal Fire Rehabilitation Plan</i> (1997). Any rehabilitation will require site-specific analysis including full cultural resource inventories on lands to be disturbed and appropriate consultation. In all cases, BLM will apply standards and guidelines approved for various resources included in Utah BLM's Standards for Rangeland Health and Guidelines for Grazing Management (SGFO RMP Appendix 3). Deference will be given to the use of least disruptive practices in areas being managed primarily for their natural values, including primitive recreation areas, designated wilderness areas, riparian zones, areas of critical environmental concern, and rivers recommended as suitable for inclusion in the National Wild and Scenic Rivers System.	Species richness and landscape heterogeneity are re-established in disturbed and fire-damaged vegetation communities through restoration projects and post-fire ES&R actions.  Genetic integrity of native communities is protected by using source-identified seeds and other plant materials for restoration and re-vegetation projects.  Progress is made toward restoration of late successional shrublands, including Joshua trees and blackbrush.  Restoration methods employ the best available science relating to natural recovery patterns of native vegetation communities.  Research is supported that increases the understanding of ecosystem processes (e.g., role of soil crusts, gramnivores, herbivores), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., livestock grazing, recreation) that affect the re-establishment of native vegetation communities and that may influence climate change.		

Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Management Guidance Common to All Alternatives</b>			
Apply BMPs and other management techniques designed to minimize loss of top soil and soil crusts during restoration projects and ES&R actions.  In planning re-vegetation projects for disturbed and fire-damaged areas, identify desired plant communities and use ecologically sustainable methods that minimize new surface disturbances and impacts on other resource values of the NCA.  Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments.  Conduct monitoring to evaluate effectiveness of re-vegetation and ES&R actions, as determined by the project-specific monitoring plans.			
<b>Management Actions</b>			
Site specific plans to identify desired plant communities, establish specific management objectives, and recommend practices to be employed to achieve desired results, where appropriate, will be prepared in collaboration with affected livestock operators, the Utah Division of Wildlife Resources, the Washington County Water Conservancy District, and other interested parties, agencies, or organizations.	Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.  Maximize the use of microsites of fertile soils (“fertile islands”) and areas where biological soil crusts are regenerating.  Authorize the use of artificial water, carbon sequestration soil treatments, or other methods that have been shown to increase success of restoration efforts in desert ecosystems.  Authorize the inoculation of cryptogamic soil crust species or mycorrhizae to restore biological soil crusts and assist plant establishment.		
The use and perpetuation of native plant species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, nonintrusive and non-native species will be approved for use where native species:  a) Are not available;  b) Are not economically feasible;  c) Cannot achieve ecological objectives as well as non-native species; and/or  d) Cannot compete with already established non-native species.	Authorize the use of native seeds, plant materials, and native plant cultivars for re-vegetation efforts, in the following order of preference:  1. Locally derived sources;  2. Regionally derived sources.  Only authorize use of non-native plant species when all the following criteria are met:  a) Desired native species are not available;  b) The natural biological diversity of the treatment area would not be diminished;  c) Exotic and naturalized species can be confined within the treatment area;  d) Restoration of native vegetation species would be facilitated by use of the non-native species;	Authorize the use of native seeds and plant materials from locally derived sources for re-vegetation efforts.	Authorize the use of native seeds, plant materials, and native plant cultivars for re-vegetation efforts, in the following order of preference:  1. Locally derived sources;  2. Regionally derived sources;  3. Native to the Mojave Desert ecoregion.  Only authorize use of non-native plant species when the following criteria are met:  a) Desired native species are not available;  b) Exotic and naturalized species can be confined within the treatment area.

Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Seed mixes used for rehabilitation will reflect a diversity of plant types suitable to the soils, climate, and landform of the area being restored. Mixes will be designed to meet a range of purposes appropriate for the land involved including wildlife, watershed, soil retention, livestock, and fire ecology.	e) Use of non-native species would benefit threatened, endangered species, including the desert tortoise.  Include a high proportion of early colonizing (early successional) annual and perennial species in seed mixes or plantings to quickly re-establish soil cover, minimize invasive species establishment, and facilitate the re-establishment of late successional species.	Include a high proportion of early colonizing (early successional) native annual and perennial species in seed mixes or plantings to quickly re-establish soil cover, minimize invasive species establishment, and facilitate the re-establishment of late successional species.	Same as Alternative B.
No similar action.	Include species in seed mixes or plantings that will function as “nurse” plants to facilitate the re-establishment of species (e.g., Joshua trees) that require shade during initial growth stages.	Include native species in seed mixes or plantings that will function as “nurse” plants to facilitate the re-establishment of species (e.g., Joshua trees) that require shade during initial growth stages.	Same as Alternative B.
No similar action.	To implement seeding restoration, authorize the use of non-invasive (e.g., aerial applications, hand scattering, surface distribution of encapsulated seeds, mulching) and minimally invasive seeding (e.g., small seed drills, hand raking) methods, as well as plug plants, containerized plants, and other plant materials.	To implement seeding restoration, authorize the use of non-invasive seeding methods (e.g., aerial applications, hand scattering, surface distribution of encapsulated seeds, mulching), as well as plug plants, containerized plants, and other plant materials.	Same as Alternative B.
No similar action.	To protect seeds from rodents, birds, and other gramnivores, authorize the use of non-invasive (e.g., seed encapsulation, mulching) and minimally invasive (e.g., small seed drills, hand raking) seed protection methods.	To protect seeds from rodents, birds, and other gramnivores, authorize the use of non-invasive seed protection methods (e.g., seed encapsulation, mulching).	Evaluate the use of invasive seed protection methods (e.g., harrowing, chaining) outside of designated critical habitats on a case-by-case basis.  Authorize the use of such methods only when scientific research demonstrates that the benefits would clearly outweigh the negative effects on listed species, habitats, and other resource values.
No similar action.	Authorize hand planting of plugs, other plant materials, and containerized plants for vegetation restoration and ES&R treatments.		

Table 2-9 Fire and Fuels Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, exhibits, demonstration treatment areas, websites) that inform visitors about vegetation/habitat restoration projects and ES&R actions.  Involve volunteers, school, youth and veterans groups, academic institutions, and partner organizations in restoration projects whenever feasible to increase public awareness and foster increased citizen stewardship of NCA lands and resources.		
Scientific Research			
No similar action.	Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in areas to be re-vegetated. Incorporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.  Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.  Pursue opportunities for scientific studies of the insect and avian pollinators that occur in the NCA and their role in the persistence and/or recovery of native species.  Pursue opportunities for scientific studies designed to better understand the role of gramnivores (e.g., ants, birds, rodents, other small mammals) and herbivores in the persistence and/or recovery of native species.  Pursue opportunities for scientific studies designed to improve the success of re-vegetation techniques for late successional species in disturbed and fire-damaged vegetation communities.  Pursue opportunities for scientific studies to develop native plant materials and native plant cultivars that can quickly re-establish in fire-damaged arid lands and prevent infestations of noxious weeds and non-native invasive species.  Pursue opportunities for scientific studies to develop cost effective and ecologically sustainable biological methods to control or eradicate noxious weeds and invasive species.		
Climate Change Monitoring			
No similar action.	Monitor the timing, frequency, and intensity of fall precipitation events in the NCA, as these events can be used to predict high invasive annual grass production in the following spring that will fuel catastrophic wildfires during the summer months.  Pursue opportunities for scientific studies to determine the carbon sequestration value of intact desert shrublands and the potential for restoration of degraded desert shrublands to be used to mitigate increasing atmospheric carbon dioxide levels.		



Table 2-10 Noxious Weeds and Invasive Species

Table 2-10 Noxious Weeds and Invasive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Ecological integrity of native vegetation communities is conserved, protected, and restored.		
Objectives			
In accordance with national and state policies, BLM will continue working with the Washington County Weed Supervisor through written agreement for the control of noxious weeds on and near public lands. In order to prevent the introduction and spread of noxious weed species, BLM will seek to develop partnerships with landowners, Washington County, state agencies, other federal land management agencies, and interested organizations. Such partnerships will formulate and analyze an integrated weed management approach to develop public awareness programs, establish weed management objectives and priorities, develop and apply common inventory techniques, implement approved treatments and control measures, and monitor and report results.	Infestations of noxious weeds and exotic invasive species are controlled and ultimately eradicated using Integrated Weed Management (IWM).  New infestations of noxious weeds and exotic invasive species are prevented through management actions and project design.  Ecologically sustainable and cost effective methods are employed for all IWM treatments.  Research is supported that increases the understanding of ecosystem processes, natural cycles (e.g., seasonal precipitation), and anthropogenic factors (e.g., livestock grazing, recreation) that affect the establishment and proliferation of noxious weeds and invasive species, and alter the historic fire regime.		
Management Guidance Common to All Alternatives			
Employ weed prevention BMPs (Appendix F) as appropriate for surface-disturbing projects and activities.			
Require the use of certified weed-free hay or other feed for livestock or recreational stock.			
Require the use of certified weed-free mulch and seed for reclamation, restoration, and re-vegetation projects.			
Management Actions			
No similar action.	Complete a systematic inventory of noxious weeds on public lands in the NCA.  Develop and maintain a Geographic Information System (GIS) database of all noxious weed and invasive species treatment projects conducted in the NCA.		
Specific weed treatments will be determined by plant species, site characteristics, and management objectives. A combination of approaches may be employed to achieve the most environmentally sound results including mechanical, biological, and chemical techniques or changes in land use.	Authorize the use of biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale (see Table 2-8 for descriptions of each method).	Authorize the use of hand removal methods for weed treatments (see Table 2-8 for descriptions of this method).	Authorize the use of biological controls, flaming, targeted grazing, hand removal, herbicide, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale (see Table 2-8 for descriptions of each method).

Table 2-10 Noxious Weeds and Invasive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Conduct monitoring and treat all weed infestations for a minimum of 5 years or until target species is eradicated.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public land use etiquette to prevent the introduction and spread of noxious weeds and non-native invasive species.  Involve volunteers, youth and veterans groups, and diverse partner organizations in the identification and mapping of noxious weed and exotic invasive species infestations and in weed treatment projects that employ hand removal and hand tool methods.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to develop ecologically sustainable and cost-effective biological controls for noxious weeds and non-native invasive species.  Pursue opportunities for scientific studies to test the effectiveness of herbicides approved for use on public lands in the reduction of exotic invasive annual grasses in Mojave Desert communities.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific studies that evaluate the effects of changing precipitation patterns and increased atmospheric carbon dioxide levels on the spread and dominance of non-native invasive annual grasses in the Mojave Desert.		

Table 2-11 Vegetation Resource Uses: Livestock Grazing

Table 2-11 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Livestock grazing is managed in conformance with the mandates of OPLMA Section 1975 (e) (4) and in a manner that conserves, protects, and enhances the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the NCA.		
<b>Objectives</b>			
BLM objectives for grazing management on public lands throughout Washington County will be to:  a) Promote healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and safe and functional watersheds;  b) Restore and improve public rangelands to properly functioning condition, where needed;  c) Provide for the sustainability of the BLM objectives for grazing management western livestock industry and communities that are dependent upon productive, healthy rangelands;  d) Ensure that public land users and stakeholders have a meaningful voice in establishing policy and managing public rangelands.	Manage livestock grazing to ensure the long-term sustainability of Mojave Desert and Great Basin ecosystems and to promote the resilience and survival of native vegetation communities under predicted climate change scenarios.  Manage livestock grazing to achieve Utah Standards and Guides (Appendix D) for upland and riparian vegetation communities, by adjusting use levels, timing and intensity of grazing, and by developing improvement and restoration projects.		
<b>Management Guidance Common To All Alternatives</b>			
The Woodbury Desert Study Area (approximately 1,063 acres in the Castle Cliffs Allotment) would remain unavailable for livestock grazing over the life of the RMP.  Conversions of types of livestock from cattle to sheep or other kind of livestock will not be authorized.			
<b>Management Actions</b>			
Spring grazing by livestock will be eliminated on those portions of the Castle Cliffs, Beaver Dam Slope, and Scarecrow Peak allotments within the ACEC except for the two special management areas recommended by the UDWR and the easternmost portion of the Woodbury Desert Study Area, which	Continue to make 61,995 acres of the following allotments available for livestock grazing within the NCA:	Make 61,995 acres of the following allotments unavailable for livestock grazing within NCA over the life of the RMP:	Continue to make 61,995 acres of the following allotments available for livestock grazing within the NCA:

Table 2-11 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
place emphasis on nontortoise management (see Map 2.9). Winter grazing on these allotments will continue in accordance with current grazing prescriptions from November 1 to March 15. Otherwise, grazing will be managed in accordance with the <i>Desert Tortoise Recovery Plan</i> , BLM’s Rangewide Desert Tortoise Plan, and other applicable studies.  Provide 3,099 initial AUMs of livestock forage within the NCA. AUM numbers may be adjusted depending on the results of ongoing rangeland monitoring.  Provide 3,099 initial AUMs of livestock forage within the NCA. AUM numbers may be adjusted depending on the results of ongoing rangeland monitoring.  (Map 2-1)	a) Beaver Dam Slope; b) Castle Cliffs; c) Cedar Pocket; d) Scarecrow Peak.  Provide 1,861 initial Animal Unit Months (AUMs) of livestock forage through a reduction of permitted use to the 20 year average of actual use in the NCA. AUM numbers may be adjusted depending on the results of ongoing rangeland monitoring.  (Map 2-1)	a) Beaver Dam Slope; b) Castle Cliffs; c) Cedar Pocket; d) Scarecrow Peak;  e) Within designated critical habitat for the Mojave desert tortoise within the ROW corridor that bisects the NCA. Eliminate 3,099 AUMs of livestock forage over the life of the RMP.  (Map 2-2)	a) Beaver Dam Slope; b) Castle Cliffs; c) Cedar Pocket; d) Scarecrow Peak.  Provide 3,099 initial AUMs of livestock forage within the NCA. AUM numbers may be adjusted depending on the results of ongoing rangeland monitoring.  (Map 2-1)
Spring grazing by livestock will be eliminated on those portions of the Castle Cliffs, Beaver Dam Slope, and Scarecrow Peak allotments within the ACEC except for the two special management areas recommended by the UDWR and the easternmost portion of the Woodbury Desert Study Area, which place emphasis on nontortoise management (see Map 2.9). Winter grazing on these allotments will continue in accordance with current grazing prescriptions from November 1 to March 15. Otherwise, grazing will be managed in accordance with the Desert Tortoise Recovery Plan, BLM’s Rangewide Desert Tortoise Plan, and other applicable studies.	Manage these allotments with the following seasons of use: a) Beaver Dam Slope: 22,363 acres: Nov 1—March 15 8,112 acres: Nov 1—May 31 b) Castle Cliffs 3,209 acres: Nov 1—March 15 5,100 acres: Nov 1—May 31 c) Cedar Pocket 2,079 acres: Oct 16—May 31 d) Scarecrow Peak 6,334 acres: Nov 1—March 15 14,795 acres: Nov 1—May 31	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative B.







Table 2-11 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Establish grazing utilization levels at 40% of current year’s growth on allotments in designated critical habitat for the desert tortoise.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Establish grazing utilization levels at 45% of current year’s growth on allotments in designated critical habitat for the desert tortoise.
Rangelands that have been burned, reseeded, or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows:  a) Burned rangelands, whether by wildfire or prescribed burning, will be ungrazed for a minimum of one complete growing season following the burn;  b) Rangelands that have been reseeded or otherwise chemically or mechanically treated will be ungrazed for a minimum of two complete growing seasons following treatment.	Temporarily exclude livestock grazing from all vegetation restoration and ES&R project areas until monitoring indicates that identified resource goals and objectives have been met.  Use fencing, closures (e.g., of pastures, portions of the allotment, or the entire allotment), grazing rest/rotation systems, or other methods that will achieve the goal of protecting the project areas from grazing impacts.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative B.
No similar action.	When grazing permits and preference are voluntarily relinquished, the allotment or portion of the allotment associated with the permits within the NCA would no longer be available for livestock grazing over the life of the RMP.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	No similar action.
Implementation Decisions			
No similar action.	Complete new Allotment Management Plans for the Beaver Dam Slope, Castle Cliffs, and Scarecrow Peak Allotments within 5 years of approval of the NCA Record of Decision and RMP.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative B.
Range Developments:			
Rangeland projects may be developed where assessments show the need to improve livestock management by establishing proper livestock control or distribution. Projects may include installation of cattle guards, development or reconstruction of	Only authorize the development of new range developments when these would further the purposes of the NCA and benefit diverse resource values (e.g., wildlife, recreational use).	Remove range improvements that do not further the purposes of the NCA nor benefit diverse resource values (e.g., wildlife, recreational use).	Same as Alternative B.

Table 2-11 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
water sources, and construction of drift or pasture fences.			
<i>Changes in Kind of Livestock:</i>			
Conversions of kinds of livestock from cattle to sheep will not be allowed where BLM, in consultation with the UDWR, determines that such will jeopardize the health or viability of existing herds of desert bighorn sheep in the Beaver Dam Mountains.	Same as Alternative A.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative A.
<i>Recreation Facilities:</i>			
No similar action.	Exclude trailheads, developed campgrounds, and other recreation and visitor facilities from permitted grazing use.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative B.
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on increasing public understanding of the history of livestock grazing in the NCA.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies developed to understand the effects of livestock grazing on native vegetation community recovery after wildfires.	Public lands within the NCA would be unavailable to grazing over the life of the RMP.	Same as Alternative B.



Table 2-12 Vegetation Resource Uses: Plant Materials

Table 2-12 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	A biologically diverse landscape is conserved, protected, and restored to support a variety of habitats and native plant and animal species.		
Objectives			
BLM’s objective for forestry management is to provide woodland products on a sustained yield basis to meet local needs where such use does not limit the accomplishment of goals for the management of other important resources. Where feasible, harvest of forest products will be encouraged in areas of proposed or existing vegetative treatments to lessen the need for additional treatment or land disturbance.	Manage harvesting and use of woodland products, native plants, and plant materials to conserve biological diversity and further restoration goals for native vegetation communities and species habitats.		
Management Guidance Common to All Alternatives			
Fees or permits would not be required for the collection of small quantities of pinyon pine seeds (pine nuts) for non-commercial personal use.			
Management Actions			
Fuelwood and Post Harvesting for Commercial and Non-Commercial Purposes:			
Closed to Fuelwood Harvest: Beaver Dam Slope ACEC (45,822 acres), Beaver Dam Wash riparian area, Critical Habitat-Mojave Desert Tortoise.	Do not authorize commercial or non-commercial fuelwood or post harvesting in the NCA.		
Christmas Tree Harvesting for Commercial or Non-Commercial Purposes:			
Christmas tree sales will not be permitted in areas closed to fuelwood sales as depicted in Table 2-8.	Do not authorize commercial or non-commercial Christmas tree harvesting in the NCA.		
Campfire Materials:			
On-site use of dead and down fuelwood for campfires will be allowed except where otherwise prohibited by planning decision or permit stipulations.	Allow the on-site use of dead and down materials for campfires, except in riparian areas.	Do not allow on-site use of dead and down materials for campfires.  Require that visitors provide fuelwood for use in campfires.	Same as Alternative B.

Table 2-12 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Native Seed Harvesting for Commercial or Non-Commercial Purposes:			
Closed to commercial and non-commercial seed harvests: Beaver Dam Slope ACEC (45,822 acres), Critical habitats for special status species-Mojave desert tortoise (50,908 acres).	Do not authorize native seed harvesting for commercial or non-commercial purposes in the NCA.		
No similar action.	Authorize native seed collection for scientific research through an NCA Scientific Research Permit.		
No similar action.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and within adjacent areas of the north-eastern Mojave Desert in southwestern Utah.	Authorize hand method seed collection for scientific studies and for restoration projects to be completed within the NCA.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and adjacent areas within the northeast Mojave Desert of southwestern Utah, Arizona, and Nevada.
Native Desert Vegetation Harvesting for Commercial and Non-Commercial Purposes:			
Because demand will rapidly exhaust the available supply, desert vegetation sales will be limited to designated salvage areas only. These areas typically include lands under construction for ROWs or other projects undertaken or approved by BLM.	Do not authorize the commercial harvesting, removal, salvage, and/or sale of native desert vegetation (e.g., cacti, succulents, other native species) in the NCA.		
Exceptions will be made for... the collection of vegetative products for Native American ceremonial or religious purposes, excluding federally-listed species.	Authorize the individual collection of native plant materials (excluding all federally-listed native plant species) by Native Americans for religious, ceremonial, and traditional purposes.		
Native Seed, Plants, and Plant Material Collection for Research, Conservation, and Restoration:			
Exceptions will be made for... the collection of vegetative products for Native American ceremonial or religious purposes, excluding federally-listed species.	Authorize collection of native seeds, plants, seedlings, cuttings, biological soil crust communities and species for scientific research through an NCA Scientific Research Permit and a Utah BLM Specimen Collection permit, where required.		
No similar action.	Authorize the collection of native seeds, seedlings, plants, cuttings, biological soil crust communities and species for conservation and future use in restoration projects. Seed collection will follow the Seeds for Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.		

Table 2-12 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and within adjacent areas of the north-eastern Mojave Desert in southwestern Utah.	Authorize hand method seed collection for scientific studies and for restoration projects to be completed within the NCA.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and adjacent areas within the northeast Mojave Desert of south-western Utah, Arizona, and Nevada.
No similar action.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust materials for restoration projects on public lands within the NCA and within adjacent areas of the northeastern Mojave Desert in southwest-ern Utah.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust materials for restora-tion projects to be completed within the NCA.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust restoration projects on public lands within the NCA and adjacent areas within the northeast Mojave Desert of southwestern Utah, Arizona, and Nevada.
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) that focus on increasing public under-standing of research related to the development of improved plant materials and restoration techniques for arid lands.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies designed to improve the success of re-vege-tation techniques for late successional species in disturbed and fire damaged vegetation communities.  Pursue opportunities for scientific studies to develop native plant materials and native plant cultivars that can quickly re-establish in fire-damaged arid lands and prevent infestations of noxious weeds and non-native invasive species.		

Table 2-13 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA

Table 2-13 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Habitats for listed species are conserved, protected, and restored to support viable populations that no longer require listing protection under the ESA.  Habitats for species proposed, petitioned, or candidates for listing under the ESA are managed, conserved, protected, and restored to support viable populations, precluding the need to list species.		
Objectives			
BLM will manage public lands to meet the goals and objectives of recovery plans, conservation agreements and strategies, approved activity level plans, and the Washington County HCP Implementation Agreement related to the recovery of special status animals in Washington County. As part of its plan implementation, BLM will work with its partners to promote public education on species at risk, significance to the human and biological communities, and reasons for protective measures that will be applied to the lands involved. BLM's objective will be to collaboratively manage habitat for federally-listed species so as to achieve recovery and delisting. Approved recovery plans will guide management decisions. Recovery plan actions already implemented will be evaluated for effectiveness in achieving desired effects and revised where studies show objectives have not been met. BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies.	Upland vegetation communities provide high quality forage or a high quality prey base, as well as cover, shade, and breeding areas that will sustain viable populations of biologically diverse terrestrial and aquatic species.  Riparian areas and natural water sources provide high quality habitat, thereby sustaining viable populations of biologically diverse terrestrial and aquatic species.  Habitat connectivity, migration routes, and movement corridors are conserved, protected, and restored to support species persistence, adaptation, and overall biodiversity under changing climate conditions.  Management of discretionary activities does not contribute to the need to list candidate or proposed species under the ESA.  Public awareness of special status species is enhanced through education, interpretation, and volunteer opportunities that further species conservation and habitat restoration.  Research is supported that increases the knowledge of threatened and endangered species that inhabit the NCA and the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		



Table 2-13 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.			
<b>Management Guidance Common to All Alternatives</b>			
Implement the goals, objectives, and management recommendations that apply to public lands from USFWS-approved Recovery Plans, Biological Opinions issued under Section 7 of the ESA. Evaluate the effectiveness of management actions through monitoring and scientific research studies.			
Continue active management programs to inventory, monitor, protect, and restore habitats for special status species, to control detrimental non-native species, and to re-establish extirpated populations, as necessary, to maintain the unique ecosystem biodiversity of NCA.			
Apply BMPs and other management techniques designed to minimize impacts on critical habitats and listed species populations that may result from land uses and authorized activities.			
<b>Management Actions</b>			
<i>Population Management:</i>			
No similar action.	Authorize the reintroduction, translocation, and population augmentation of special status species populations into current or historic habitats in the NCA, in coordination with USFWS and UDWR, to assist recovery and delisting of threatened or endangered species and preclude the need to list other at-risk species.  Monitor the long term success of population management actions and use Adaptive Management Strategies to improve desired outcomes.		
In collaboration with affected state and federal agencies, predator control in either area may be allowed using techniques designed to control target species only. This will reduce the loss of hatchlings and juvenile tortoises to predators such as coyotes and ravens.	Collaborate with USFWS, UDWR, and appropriate United States Department of Agriculture (USDA) agencies on predator control, if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable populations of listed species. Require the development of target species-specific predator control plans supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		
<i>Habitat Management:</i>			
No similar action.	Suppress wildfires in special status species habitats using tactics that minimize fire size, impacts on species populations, native vegetation communities, and other ecosystem components, while ensuring that firefighter safety and private property are given highest priority.  Prioritize habitat restoration projects and post-fire ES&R treatments as follows: 1. Designated critical habitats for federally-listed threatened and endangered species; 2. Habitats for candidate and proposed species for listing under ESA.		
No similar action.	Manage livestock grazing to avoid impacts on special status species through season-of-use restrictions or other modifications to livestock grazing systems.	NCA would be unavailable for livestock grazing over the life of the RMP.	Same as Alternative B.
No similar action.	Do not authorize recreational activities or uses in areas where special status species habitats may be degraded by these authorizations.		

Table 2-13 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Only authorize new land uses in special status species habitats if reasonable alternative locations outside of these habitats do not exist and impacts to habitats can be avoided or appropriately mitigated.  Maintain habitat connectivity, migration routes, and movement corridors through project placement, design, and permit stipulations to support special status species persistence, adaptation, and overall biodiversity under changing climate conditions.		
Public Education and Interpretation			
As part of its plan implementation, BLM will work with its partners to promote public education on species at risk, significance to the human and biological communities, and reasons for protective measures that will be applied to the lands involved.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate land use etiquette and the need to protect populations and habitats for terrestrial and aquatic species that are listed or proposed for listing under the protection of the ESA.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about terrestrial and aquatic special status species, their evolutionary adaptations to an arid landscape where surface water is limited, and the factors that have contributed to the need to list these species under the ESA.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the rich biodiversity created by the convergence of the Mojave Desert and Great Basin ecosystems that can be experienced in the NCA.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to determine the habitat value of native vegetation communities of different successional stages for diverse wildlife species to improve habitat protection and restoration project planning for special status species.		

ALTERNATIVE TABLE 2-14				ALTERNATIVE TABLE 2-14			
Table 2-14 Special Status Bird Species: Southwestern Willow Flycatcher, Yellow Billed Cuckoo, and Other Riparian-Dependent Special Status Bird Species				Table 2-14 Special Status Bird Species: Southwestern Willow Flycatcher, Yellow Billed Cuckoo, and Other Riparian-Dependent Special Status Bird Species			
Alternative A (No Action)		Alternative B	Alternative C	Alternative D			
Goal				Public Education and Interpretation			
		Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> ) and yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> ) populations that utilize habitats in the NCA would be stable or increasing, helping to meet recovery and delisting goals for each species.		No similar action.		Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about the riparian areas and the diverse avian species that depend upon this habitat.	
Objectives				Scientific Research			
BLM will protect potential flycatcher habitat through implementation of land use prescriptions for riparian resources described earlier in this Plan. Among other things, the prescriptions will allow no surface occupancy for fluid mineral leasing, limit off-road travel, discourage ROW construction, and prohibit sales of fuelwood and mineral materials. The prescriptions also call for retention and acquisition of prospective habitat.		Riparian habitats along Beaver Dam Wash and elsewhere in the NCA would include the vegetative species diversity, density, and canopy cover required to provide suitable habitat for southwestern willow flycatchers.  Cottonwood gallery forests along Beaver Dam Wash would provide suitable habitat for yellow-billed cuckoos.  Riparian areas would be in proper functioning condition and provide adequate foraging, roosting, and nesting sites for riparian-obligate special status avian species.  Research is supported that increases baseline data related to riparian-obligate avian species that utilize the NCA.  Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		No similar action.		Develop new volunteer opportunities for partners, youth groups, and citizen scientists to assist with collecting observations of southwestern willow flycatcher, yellow-billed cuckoo, and other riparian-obligate avian species in the NCA along Beaver Dam Wash.	
Management Guidance Common to All Alternatives							
Management of riparian habitat would be consistent with the <i>Final Recovery Plan: Southwestern Willow Flycatcher (Empidonax traillii extimus)</i> (USFWS 2002) and the Biological Opinion issued by USFWS for the Beaver Dam Wash NCA Proposed RMP.							
Management Actions							
Where known active nest sites are located on public lands, BLM will implement seasonal closures for the period of April 1 to August 30 within 0.5 mile of nests for discretionary permits authorizing construction or other disruptive activity.  In conjunction with affected partners and landowners, BLM will help identify desired plant communities needed to support viable flycatcher habitat. Where consistent with USFWS consultations, BLM will work with its partners in reestablishing desirable plant species, including willow and cottonwood, for long-term habitat enhancement and removal of undesired species in selected areas.		Maintain a database of observations of southwestern willow flycatchers and yellow-billed cuckoos.  Develop maps of potential habitats for southwestern willow flycatcher and yellow-billed cuckoo that include location, size, shape, spacing, and condition of habitat areas.  Manage potential habitat for southwestern willow flycatcher and yellow-billed cuckoos to allow natural regeneration into suitable habitat as rapidly as natural conditions allow.  Manage suitable habitat for southwestern willow flycatcher and yellow-billed cuckoos to conserve and protect its suitability for nesting, foraging, and occupancy.  Monitor changes in the relative abundance, health, reproductive success, and distribution of populations, in partnership with USFWS and UDWR.  Authorize the translocation, and population augmentation of southwestern willow flycatcher and yellow-billed cuckoos, in consultation with USFWS and UDWR.					

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Table 2-15 Special Status Bird Species: California Condor

Table 2-15 Special Status Bird Species: California Condor			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	California condor ( <i>Gymnogyps californianus</i> ) populations that may utilize habitats in the NCA would be stable or increasing, helping to meet recovery and delisting goals for this species.		
Objectives			
No similar action.	Native vegetation communities and riparian areas sustain potential roosting sites and a high quality prey base for California condors.  Environmental hazards that may affect California condors are reduced or eliminated.		
Management Guidance Common to All Alternatives			
Management of habitat would be consistent with the <i>Recovery Plan for the California Condor</i> (USFWS 1996) and Biological Opinions issued by USFWS.			
Management Actions			
No similar action.	Authorize the reintroduction, translocation, and supplemental releases of California condors into historic habitats in coordination with USFWS.  Maintain a database of observations of California condors and their prey, should they be observed using the NCA.  Coordinate with partners (e.g., UDWR, National Audubon Society, National Wildlife Federation) to promote the use of non-lead ammunition in the NCA.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about California condors and the captive breeding and release programs ongoing on public lands on the Arizona Strip.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform hunters about the need to use non-lead ammunition to minimize impacts on California condors and other predators and scavengers.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about the need to pack out food wastes and litter that may cause choking and death when consumed by condors.		
Scientific Research			
No similar action.	Develop new volunteer opportunities for partners, youth groups, and citizen scientists to assist with collecting observations of California condors in the NCA.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for research that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence the prey base of condors under predicted climate change scenarios.		

Table 2-16 Special Status Reptile Species: Desert Tortoise

Table 2-16 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Desert tortoise ( <i>Gopherus agassizii</i> ) populations in the NCA have made measurable progress toward meeting the recovery goals, objectives, and identified criteria for viable populations established by <i>Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 1994) and the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).		
<b>Objectives</b>			
BLM will work collaborative-ly with local, state, and federal partners to accomplish the goals and the objectives of the Washington County HCP and Red Cliffs Desert Reserve. Major goals include the preservation and protection of the desert tortoise and its habitat so as to achieve full recovery of the tortoise as well as their listed or sensitive species found within the Upper Virgin River Recovery Unit.	Land uses and authorized activities are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover), reproductive, and home range requirements of viable desert tortoise populations.  Ecologically intact core areas of designated critical habitat are conserved and protected from fragmentation and loss of native vegetation communities through appropriate land use allocations and management actions across BLM programs.  Ecological integrity of damaged native vegetation communities is restored through appropriate re-vegetation methods and the control and eradication of noxious weeds and non-native invasive species.  Land uses and authorized activities are managed so that habitats provide ecological diversity and connectivity to create genetic resilience for desert tortoise populations under changing climatic conditions.  Research is supported that increases the knowledge of Mojave desert tortoise life histories and population dynamics in the NCA.  Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		
<b>Management Guidance Common to All Alternatives</b>			
Implement the goals, objectives, and management recommendations identified in the Revised Recovery Plan for the Mojave Desert Tortoise (USFWS 2011), as well as the terms and conditions from the Biological Opinions for the Beaver Dam Wash NCA to assist recovery and delisting of the desert tortoise. Evaluate the effectiveness of management actions through monitoring and scientific research studies.			
Install tortoise barrier fencing along U.S. Highway 91 or other heavily traveled public use roadways in the NCA to minimize tortoise injuries and mortalities caused by motorized vehicles.			
Coordinate with Washington County to post speed limits on heavily traveled public use roads where tortoise barrier fencing has not been installed to minimize tortoise injuries and mortalities caused by motorized vehicles.			
<b>Management Actions</b>			
<i>Population Management:</i>			
In collaboration with affected state and federal agencies, predator control in either area may be allowed using techniques designed to control target species only. This will reduce the loss of hatchlings and juvenile tortoises to predators such as coyotes and ravens.	Authorize the translocation and population augmentation of desert tortoises in consultation with USFWS and UDWR.  Monitor changes in the relative abundance, health, reproductive success, and distribution of tortoise populations, in partnership with USFWS and UDWR.  Collaborate with USFWS, UDWR, and appropriate USDA agencies on predator control if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable desert tortoise populations. Require the development of target species-specific predator control plans supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		

Table 2-16 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Habitat Conservation, Protection, and Restoration:</i>			
No similar action.	<p>Prioritize the acquisition of non-federal lands or interests in critical tortoise habitat within the NCA boundaries from willing land owners through purchase, exchange, or donation.</p> <p>Whenever possible, acquire both surface and subsurface rights to avoid the creation of split estates.</p> <p>Acquire conservation easements when such interest would further the goals of recovery and delisting of the desert tortoise or other at-risk species.</p> <p>Prioritize conservation and protection of critical habitat through firebreaks, appropriate wild-fire suppression responses, and control or eradication of noxious weeds and invasive species.</p> <p>Establish monitoring plots and conduct long-term monitoring using desired plant species frequency, density, and distribution data to evaluate the effectiveness of the vegetation restoration projects.</p> <p>Require reclamation for activities that result in the loss or degradation of tortoise habitat. Good quality habitat would be restored to as close to pre-disturbance conditions as practicable. Damaged habitats would be improved to good quality through restoration, wherever practicable. Additional mitigation measures may be included in decision documents to offset the loss of quality and quantity of tortoise habitat.</p> <p>Authorized actions that may result in adverse effects (“incidental take”) of desert tortoises would require implementation of project stipulations including personnel education programs, pre-construction clearances, operational restrictions, and procedures for moving tortoise out of harm’s way.</p>		
<b>Public Education and Interpretation</b>			
BLM will also work with state and local agencies, school districts, and interested citizen groups to develop educational programs to increase public awareness of habitat requirements, desert ecosystems, reasons for protective management, and other factors related to species recovery.	<p>Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about Mojave Desert species, their evolutionary adaptations to an arid landscape where surface water is limited, and the factors that have contributed to the need to list these species under the ESA.</p> <p>Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate land use etiquette and the need to protect populations and habitats for desert tortoises and other Mojave Desert wildlife. Encourage public land users to pack out food scraps and litter that will attract predators that prey on tortoises, particularly juveniles.</p> <p>Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the rich biodiversity of the NCA created by the convergence of the Mojave Desert and Great Basin ecosystems.</p>		
<b>Scientific Research</b>			
BLM will continue to authorize and support research needed to determine habitat requirements, causes of increased mortality, and other essential factors related to the management of the desert tortoise and its eventual recovery. BLM will also collaborate with the UDWR, the USFWS, university researchers, and other interested parties in developing and implementing monitoring studies that will evaluate	<p>Pursue opportunities for scientific studies to determine the level and effects of predation on desert tortoise populations in the NCA.</p> <p>Pursue opportunities for scientific studies to determine the effects of intensive non-motorized recreation on desert tortoise populations in the NCA.</p> <p>Pursue opportunities for scientific studies to determine the relative abundance of desert tortoise populations in the NCA.</p> <p>Pursue opportunities for scientific studies to determine age classes, gender ratios, and the health of desert tortoise populations in the NCA.</p> <p>Pursue opportunities for scientific studies to determine the effects of livestock grazing on tortoise populations and post-fire native vegetation community recovery.</p>		

Table 2-16 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
population trends, tortoise health, vegetation condition and trend, and other factors needed to assess the effectiveness of management actions. Where it is determined that recovery objectives are not being met, BLM will work with its interested partners to determine the cause of such failure and to adjust its management prescriptions accordingly.			
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific studies to determine the effects of predicted higher winter temperatures on desert tortoise hibernation patterns, using observed changes as an indicator to monitor climate change.		



Table 2-17 BLM Sensitive Species

Table 2-17 BLM Sensitive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Habitats for aquatic and terrestrial BLM sensitive species support viable, self-sustaining populations that do not require listing under the ESA.		
Objectives			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Land uses and authorized activities on public lands are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover), reproductive, and home range requirements of sensitive species populations in the NCA.		
	Ecologically intact core areas of sensitive species habitats are conserved and protected from fragmentation and loss of native vegetation communities through appropriate management actions across all BLM programs.		
	Ecological integrity of damaged native vegetation communities is restored, through appropriate re-vegetation methods and control and eradication of noxious weeds and invasive non-native species.		
	Land uses and authorized activities on public lands are managed so that habitats provide ecological diversity and connectivity to create resiliency for sensitive species populations under changing climate conditions.		
	Research is supported that increases the amount of baseline data related to sensitive species that occupy and/or utilize the NCA.		
	Research is encouraged that informs the management of habitats for at-risk species under predicted climate change scenarios.		
Management Guidance Common to All Alternatives			
Implement the goals, objectives, and management recommendations that apply to public lands from Executive Orders, Conservation Agreements and Strategies, and BLM policies. Evaluate the effectiveness of management actions through monitoring and scientific research studies.			
Continue active management programs to inventory, monitor, protect, and restore habitats for sensitive species, control detrimental non-native species, and re-establish extirpated populations, as necessary, to maintain biodiversity.			
Apply BMPs and other management techniques designed to minimize impacts on critical habitats as a result of land uses, authorized activities, and habitat restoration actions.			
Management Actions			
Population Management:			
No similar action.	Authorize the reintroduction, translocation, and population augmentation of native sensitive species into historical and current habitats, in consultation with UDWR, to restore populations and enhance or maintain current populations, distributions, and genetic diversity.		
	Monitor the long term success of the population actions and use Adaptive Management Strategies to improve desired outcomes.		
	Monitor changes in relative abundance and distribution of sensitive species populations in the NCA, in partnership with UDWR.		
	Collaborate with UDWR and appropriate USDA agencies on predator control, if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable populations of sensitive species. Require the development of target species-specific predator control plans, supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		

Table 2-17 BLM Sensitive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Habitat Conservation, Protection, and Restoration:</i>			
No similar action.	Only authorize new land uses in sensitive species habitats if reasonable alternative locations outside of these habitats do not exist and impacts to species populations and habitats can be mitigated.  Maintain habitat connectivity, migration routes, and movement corridors through project placement, design, and permit stipulations to support sensitive species persistence, adaptation, and overall biodiversity under changing climate conditions.		
<b>Public Education and Outreach</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about sensitive species, their evolutionary adaptations, and the factors that have contributed to declining populations.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies to determine the relative abundance of sensitive species populations in the NCA.  Pursue opportunities for scientific studies to determine age classes, gender ratios, and the health of sensitive species populations in the NCA.  Pursue opportunities for scientific studies to determine the level and effects of predation on sensitive species populations in the NCA.		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities to establish a long-term monitoring program to detect changes in seasonal migrations patterns (arrival and departure dates) of selected migratory bird species as potential indicators of climate change.		

Table 2-18 BLM Sensitive Native Fish Species

Table 2-18 BLM Sensitive Native Fish Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Aquatic habitats in Beaver Dam Wash support stable or increasing populations of BLM sensitive fish species including Virgin spinedace ( <i>Lepidomeda mollispinis</i> ) and desert sucker ( <i>Catostomus clarki</i> ), helping to ensure that neither of these species requires listing under the ESA.		
<b>Objectives</b>			
Management of public land habitat for listed and sensitive fish species in the Virgin River and associated tributaries will be guided by the 1995 Virgin River Fishes Recovery Plan and the 1995 Virgin Spinedace Conservation Agreement and Strategy. Implementation of the plan and the strategy has been underway since their respective approvals and will continue in collaboration with the UDWR, the USFWS, the Washington County Water Conservancy District, and other interested local, state, and federal entities. The overriding goal is to achieve recovery of the species to allow downlisting and eventual delisting of the two endangered fish and to eliminate the need for listing of the spinedace. Objectives include eliminating significant threats to the fish and their habitats and to stabilize and enhance specific reaches of occupied and historic habitat.	Aquatic habitat in the Beaver Dam Wash on public lands provides interspersed pools, runs, and riffles of clear, cool water of sufficient quality and quantity to support viable populations of Virgin spinedace and desert sucker.  Non-native invasive fish species are eradicated in Beaver Dam Wash.  Research is supported that increases baseline data related to Virgin River native fish in the NCA.  Research is encouraged that informs the management of aquatic habitats for at-risk species under predicted climate change scenarios.		
<b>Management Guidance Common to All Alternatives</b>			
Management actions will be guided by the <i>Virgin River Fishes Recovery Plan</i> (USFWS 1995), <i>Virgin River Resource Management Plan and Recovery Program</i> (USFWS 2000) and <i>Fish and Wildlife 2000: Special Status Fish Habitat Management</i> (BLM 1991).			
<b>Management Actions</b>			
BLM will provide appropriate support to active partners in the Virgin River Fishes Recovery Team in implementing the following measures called for in the plans:  a) Monitor fish populations and habitat conditions;	Assist with monitoring efforts for Virgin spinedace and desert sucker populations in cooperation with UDWR and the partners of the Virgin River Recovery Program.  Authorize the reintroduction, translocation, and population augmentation of Virgin spinedace and desert sucker into suitable habitats in the NCA.  Assist with eradication of non-native invasive fish species in cooperation with UDWR and the partners of the Virgin River Recovery Program.  Pursue acquisition of non-federal lands within the NCA that would benefit the conservation, protection, and restoration of aquatic habitats.		

Table 2-18 BLM Sensitive Native Fish Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
b) Eradicate exotic fish species in selected reaches; c) Reintroduce desired native fish species; d) Restore degraded habitats; e) Implement controls over conflicting land use; f) Reestablish instream population maintenance flows through agreements and other appropriate mechanisms.	Monitor land uses and authorized activities in Beaver Dam Wash, such as livestock grazing, recreation, and casual prospecting, that have the potential to degrade water quality, damage riparian vegetation, and collapse stream banks that provide shade and cover for aquatic species.  Restrict, modify, or eliminate any land uses and authorized activities that are shown to degrade aquatic habitat in the Beaver Dam Wash.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues both off-site and along Beaver Dam Wash within the NCA (e.g., trailhead kiosks) that educate visitors about Virgin spinedace and desert sucker, their evolutionary adaptations, and the factors that are contributing to declining populations.		
Scientific Research			
No similar action.	Pursue opportunities to increase the amount of baseline data and scientific knowledge related to the specific habitat requirements of native fish of Beaver Dam Wash.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to collect data on changing precipitation patterns in the Beaver Dam Wash watershed that have the potential to impact aquatic habitats under predicted climate change scenarios.		



Table 2-19 BLM Sensitive Raptor Species

Table 2-19 BLM Sensitive Raptor Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Diverse raptor populations that utilize the NCA are viable or increasing and do not require listing under the ESA. BLM sensitive raptor species present in the NCA include: bald eagle ( <i>Haliaeetus leucocephalus</i> ), burrowing owl ( <i>Athene cunicularia</i> ), ferruginous hawk ( <i>Buteo regalis</i> ), northern goshawk ( <i>Accipiter gentilis</i> ), and short eared owl ( <i>Asio flammeus</i> ).		
Objectives			
BLM will continue to implement recovery plans for the federally-listed species and collaborate with the UDWR and interested conservation groups in conducting inventories, protecting nest sites and aeries, and preserving associated habitats.	Land uses and authorized activities on public lands are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover/perching), reproductive, and home range requirements of diverse species of raptors.  Habitats for raptors provide high quality roosting and nesting sites and diverse prey base, thereby sustaining viable populations of these species.  Environmental hazards that could impact raptors are minimized.  Research is supported that increases the amount of baseline data related to all species of raptors and the prey base that they utilize in the NCA.		
Management Guidance Common to All Alternatives			
Monitor potential habitat for raptors and maintain a database of raptor observations.			
Management Actions			
No similar action.	Authorize the reintroduction, transplantation, and population augmentation of bald eagles, ferruginous hawks, northern goshawks, and short eared owls where doing so would not be detrimental to the viability of other native species.  Authorize the population augmentation of burrowing owls and the installation of artificial nest burrows where doing so would not be detrimental to the viability of other native species.  Maintain a geospatially linked database of observations of diverse raptors and their prey.  Coordinate with partners (e.g., UDWR, National Audubon Society, National Wildlife Federation) to promote the use of non-lead ammunition in the NCA.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that educate the public about raptors and their role in the ecosystems of the NCA.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform hunters about the need to use non-lead ammunition to minimize impacts on raptors.		
Scientific Research			
Biological surveys will be conducted to identify sensitive species occurrence, nesting sites (for the northern goshawk and ferruginous hawk), and special habitat requirements. Data gained from the surveys will be used by BLM, UDWR, and other affected partners to develop and implement recommendations for habitat management needed to maintain healthy populations of the species involved and reduce the need for additional listings.	Pursue opportunities to collect baseline observational data on raptor species that occur in the NCA and develop location maps of nesting and roosting sites, as well as information on the prey base for each species.  Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for raptors, carnivores, and other predatory species, including rodents, desert cottontails ( <i>Sylvilagus audubonii</i> ), and black-tailed jackrabbits ( <i>Lepus californicus</i> ).  Develop new volunteer opportunities for partners, special interest groups, birding enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for eagles, hawks, falcons, and owls that utilize the NCA.		

Table 2-19 BLM Sensitive Raptor Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities for monitoring and research that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence the prey base of raptors under predicted climate change scenarios.		

ALTERNATIVE TABLE 2-20			ALTERNATIVE TABLE 2-20		
Table 2-20 Migratory Birds and Birds of Conservation Concern			Table 2-20 Migratory Birds and Birds of Conservation Concern		
Alternative A (No Action)	Alternative B	Alternative C	Alternative D	Alternative A (No Action)	Alternative B
Goal			Climate Change Monitoring		
Migratory bird species and Birds of Conservation Concern that utilize the NCA do not require listing under the protection of the ESA (see Appendix G for species list).			No similar action.		
Objectives			Pursue research opportunities that focus on changes in the seasonal migration patterns of selected migratory bird species as potential indicators of climate change.		
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.					
Biologically diverse habitats that provide essential breeding, nesting and roosting sites, space, cover, and food for migratory birds would be conserved, protected, and restored.					
Research is supported that increases the amount of baseline data related to all species of migratory birds and their diverse habitat requirements.					
Research is encouraged that identifies changes in migration patterns as a potential indicator of climate change.					
Management Guidance Common to All Alternative					
Only authorize actions that would adversely impact nesting migratory birds if they are subject to seasonal restrictions or mitigation requirements.					
Management Actions					
No similar action.			Minimize disturbances or adverse effects on breeding bird populations that might result from authorized activities through seasonal restrictions, special permit stipulations, or other appropriate mitigation measures.		
Public Education and Interpretation					
No similar action.			Provide educational materials through various media and at on-site venues along Beaver Dam Wash that educate the public about migratory bird species, the causes for declining populations, and the need to protect riparian habitats and seasonal migration routes.		
			Promote opportunities for viewing and photographing diverse species of migratory birds through interpretive materials, recreation trails, and special outreach activities such as guided birding hikes along Beaver Dam Wash.		
			In partnership with the National Audubon Society and others, recruit and train youth groups, citizen stewards, and other volunteers to participate in annual migratory bird counts in Beaver Dam Wash and elsewhere in the NCA.		
Scientific Research					
No similar action.			Pursue opportunities to conduct field inventories of riparian areas along the Beaver Dam Wash and Welcome Creek to identify avian species that utilize the NCA.		
			Pursue opportunities to collect baseline observational data on migratory birds and other avian species and develop location maps of occupied habitats and nesting sites.		
			Pursue opportunities to conduct systematic inventories of migratory birds that utilize the NCA and evaluate the condition of the preferred habitats for each species.		
			Develop new volunteer opportunities for partners, special interest groups, birding enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for migratory birds, Birds of Conservation Concern and Partners in Flight species.		
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ALTERNATIVE TABLE 2-21			ALTERNATIVE TABLE 2-21		
Table 2-21 BLM Sensitive Mammal Species			Table 2-21 BLM Sensitive Mammal Species		
Alternative A (No Action)	Alternative B	Alternative C	Alternative D	Alternative A (No Action)	Alternative B
Goal			Scientific Research		
Habitats for BLM sensitive mammal species support viable populations that do not require listing under the ESA. Sensitive mammals present in the NCA include: kit fox ( <i>Vulpes macrotis</i> ), Allen’s big-eared bat ( <i>Idionycteris phyllotis</i> ), big free-tailed bat ( <i>Nyctinomops macrotis</i> ), fringed myotis ( <i>Myotis thysanodes</i> ), spotted bat ( <i>Euderma maculatum</i> ), Townsend’s big-eared bat ( <i>Corynorhinus townsendii</i> ), and western red bat ( <i>Lasiurus blossevillii</i> ).			No similar action.		
Objectives			Pursue opportunities for scientific studies to collect population and life history data on the kit fox in the NCA.		
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.			Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for the kit fox.		
Management Guidance Common to All Alternatives			Pursue opportunities to conduct field inventories of caves, abandoned mines, cliffs, and other suitable habitats to identify all of the bat species that utilize the NCA.		
As needed, implement National White Nose Syndrome Decontamination Protocol and BLM IM 2010-181 in the management of habitats for sensitive species bats.			Pursue opportunities to collect baseline observational data on bat species and develop location maps of occupied habitats, hibernacula, and maternity roost sites.		
Management Actions			Develop new volunteer opportunities for partners, special interest groups, cave enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for sensitive mammal species.		
No similar action.			Authorize the reintroduction, transplantation, and population augmentation of sensitive mammal species where doing so would not be detrimental to the viability of other native species.		
			Do not authorize the use of herbicides, pesticides, or poisons that are injurious or toxic to sensitive mammal species, will damage native vegetation communities, or will reduce the quality and quantity of species that comprise their prey base.		
			Manage caves, karst resources, and abandoned mines to protect bat habitat (e.g., foraging, roosting, maternity sites, winter hibernacula) and reduce the potential spread of contagious diseases, such as White Nose syndrome, in bat populations.		
			Require the installation of bat-friendly gates in caves and karst features that require access restrictions or closure.		
			Where appropriate, limit abandoned mine closure methods to the installation of bat-friendly gates for those abandoned mines that provide habitat (e.g., foraging, roosting, maternity sites, winter hibernacula) for bats.		
			Install bat friendly escape ramps in troughs or other artificial water sources.		
			Do not authorize activities that have the potential to disturb bats within a 0.25 mile radius of maternity roost sites and winter hibernacula, including all entrances to caves, karst features, and abandoned mines.		
Public Education and Interpretation					
No similar action.			Provide educational materials through various media and venues both off-site and on, such as at abandoned mines in the Beaver Dam Mountains, to inform visitors about the many sensitive mammal species found in the NCA, as well as their diverse habitats and prey.		
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ALTERNATIVE TABLE 2-22				ALTERNATIVE TABLE 2-23			
Table 2-22 BLM Sensitive Reptile and Amphibian Species				Table 2-23 Other Fish and Wildlife Habitat Management			
Table 2-22 BLM Sensitive Reptile and Amphibian Species				Table 2-23 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal				Goal			
	Reptiles and amphibians identified as BLM sensitive species do not require listing under the ESA. Sensitive reptiles and amphibians present in the NCA include the common chuckwalla ( <i>Sauromalus ater</i> ), desert iguana ( <i>Dipsaurus dorsalis</i> ), desert night lizard ( <i>Xantusia vigilis</i> ), Gila monster ( <i>Heloderma suspectum</i> ), Mojave rattlesnake ( <i>Crotalus scutulatus</i> ), sidewinder ( <i>Crotalus cerastes</i> ), speckled rattlesnake ( <i>Crotalus mitchellii</i> ), western banded gecko ( <i>Coleonyx variegatus</i> ), western thread-snake ( <i>Leptotyphlops humilis</i> ), zebra-tailed lizard ( <i>Callisaurus draconoides</i> ), and Arizona toad ( <i>Bufo microscaphus</i> ).				Aquatic and terrestrial habitats support viable populations of diverse native wildlife species and provide for biological diversity, ecological resilience, and species persistence under predicted climate change scenarios.		
Objectives				Objectives			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Introduced populations would increase to the point of being viable, self-sustaining populations of native endemic reptile and amphibian species.  Biologically suitable habitats would be conserved and protected.  Research is supported that increases the baseline data related to reptiles and amphibians in the NCA.  Research is encouraged that informs the management of reptile and amphibian habitats under predicted climate change scenarios.			BLM’s overall objective for fish and wildlife habitat management will be to maintain habitats in properly functioning conditions to support natural wildlife diversity, reproductive capability, and appropriate human use and enjoyment. An important objective of BLM’s habitat management program will be to work with state, local, and other federal partners to minimize or eliminate the need for additional listing of species under the Endangered Species Act in Washington County.	Crucial and substantial habitats for diverse native wildlife species on public lands provide high quality forage or a high quality prey base, as well as water, space, cover, and breeding areas, thereby sustaining viable populations and overall ecosystem biodiversity and resilience.  Multi-species habitat connectivity, migration routes, and movement corridors are conserved and protected between ecological zones to facilitate species persistence, adaptation, and overall biodiversity under predicted climate change scenarios.  Research is supported that increases the amount of baseline data related to all species of wildlife and their diverse habitat requirements.  Research is encouraged that increases general understanding of ecosystem processes and anthropogenic influences on changing climatic conditions.		
Management Actions				Management Guidance Common to All Alternatives			
No similar action.	Authorize the reintroduction, transplantation, and population augmentation of Arizona toad, northern leopard frog ( <i>Rana pipiens</i> ), lowland leopard frogs ( <i>Rana yavapaiensis</i> ), and relict leopard frogs ( <i>Rana onca</i> ) to suitable habitat locations, where doing so would not be detrimental to the viability of other native species.  Authorize the reintroduction, transplantation, and population augmentation of sensitive reptile species, where doing so would not be detrimental to the viability of other native species.  Do not authorize the use of herbicides, pesticides, or poisons that are injurious or toxic to sensitive reptile or amphibian species, will damage native vegetation communities, or will reduce the quality and quantity of species that comprise their prey base.			Develop new wildlife waters in collaboration with UDWR in areas where field studies reveal the need for such to maintain healthy, viable populations of mule deer or other game and nongame species. Such waters will be developed in accordance with the objectives and guidelines of applicable game, nongame, and habitat management plans.  Ensure that all existing and proposed artificial wildlife waters include escape ladders or are designed to allow safe access by game birds.  Ensure that all new or replacement range-type fencing conforms to BLM specifications that allow safe passage for game and nongame wildlife species.			
Public Education and Interpretation				Management Actions			
No similar action.	Provide educational materials through various media and venues both off-site and along Beaver Dam Wash to inform visitors about the diverse species that occupy these habitats.			BLM will manage suitable public land habitats for the recovery or reestablishment of native populations through collaborative planning with local, state, and federal agencies, user groups, and interested organizations. BLM will also seek to limit additional adverse impacts to crucial habitats on public lands from urbanization and encroachment to preserve the integrity of wildlife corridors and migration routes and access to key forage, nesting, and spawning areas.	Authorize the reintroduction, transplantation, and augmentation of priority native wildlife species populations (as defined in <i>BLM Manual 1745</i> or subsequent guidance) into current or historic habitats in the NCA, in coordination with USFWS and UDWR in order to (a) maintain current population numbers, distributions, and genetic diversity, and (b) restore or enhance native species populations.		
Scientific Research							
No similar action.	Pursue opportunities to conduct field inventories to identify amphibians and reptiles that are found in springs/seeps, and along Beaver Dam Wash.  Pursue opportunities to increase the amount of baseline data and scientific knowledge related to the life histories, population trends, habitat requirements, and threats to amphibians and reptiles in the NCA to inform the management of aquatic habitats.						

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Table 2-23 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Desert Bighorn Sheep ( <i>Ovis canadensis nelsoni</i> ):			
Desert bighorn sheep habitat in the Beaver Dam Mountains will continue to be managed in collaboration with the UDWR to support the existing herd in that location. Existing water developments will be maintained with the help of volunteers and interested organizations.	Manage desert bighorn sheep habitat in the NCA portion of the Beaver Dam Mountains to assist UDWR in achieving long-term herd population goals and objectives.		
No similar action.	Implement seasonal restrictions on recreational uses such as climbing or rappelling when monitoring indicates that these are impacting bighorn sheep populations during lambing (March 1 through May 31) and breeding seasons (July 1 through August 31).		
Mule Deer ( <i>Odocoileus hemionus</i> ):			
Crucial mule deer winter range will be protected from the potential effects of fluid mineral leasing with a Category 2 seasonal stipulation to close the lands to exploration or development from November 1 to April 15. Elk calving areas will be closed for the same reason from May 1 to July 30. These seasonal use restrictions will also be applied to mineral materials sales, forest product sales, and ROWs construction.  In collaboration with the UDWR and other interested parties, BLM will develop new wildlife waters in areas where field studies reveal the need for such to maintain healthy, viable populations of mule deer or other game and nongame species. Such waters will be developed in accordance with the objectives and guidelines of applicable game and nongame management plans, habitat management plans, and allotment management plans.	Manage mule deer habitat to assist UDWR in achieving long-term herd population goals and objectives.  Restrict dispersed camping to designated sites that do not impede wildlife access to water sources.  Remove unnecessary range-type fencing within the NCA to lessen potential for injuries and entanglement by mule deer, particularly fawns.  Include native vegetation species that benefit mule deer in upland habitat restoration and ES&R projects.		
Gambel's Quail ( <i>Callipepla gambelii</i> ), Mourning Dove ( <i>Zenaida macroura</i> ), and Other Game Birds:			
No similar action.	Include native vegetation species that provide forage, cover, and nesting opportunities for quail and other game birds in habitat restoration and ES&R projects.		

Table 2-23 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Ensure that all existing and proposed livestock water troughs include escape ladders for game birds.	No similar action.	Same as Alternative B.
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the diverse fish and wildlife species of the NCA.		
No similar action.	Enhance opportunities for public viewing and photographing of bighorn sheep, mule deer, game birds, and other wildlife through special outreach activities such as guided wildlife photography hikes.  Authorize documentary and educational filming of wildlife through film permits, consistent with the Congressionally-defined purposes of conservation, protection, and restoration of resource values on public lands in the NCA.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to collect population and life history data on carnivore species, such as mountain lion ( <i>Puma concolor</i> ) and bobcat ( <i>Lynx rufus</i> ), in the NCA.  Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for raptors, carnivores, and other predatory species, including rodents, desert cottontails, and black-tailed jackrabbits.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to identify key riparian connectivity zones within and outside the NCA that will facilitate wildlife movement under predicted changes in seasonal precipitation patterns and increased ambient temperatures.		

Table 2-24 Heritage Resources

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Heritage resources are conserved, protected, and restored for the benefit of present and future generations, consistent with the mandates from OPLMA.		
<b>Objectives</b>			
In managing cultural and paleontological resources on public lands, BLM will seek to:  a) Employ reasonable measures and land use controls needed to reduce impacts from urbanization and human encroachment;  b) Apply the principles of conservation management to selected areas to maintain such resources in their present condition for future study and enjoyment;  c) Reduce looting and vandalism through increased public education, surveillance, and enforcement;  d) Provide for legitimate field research by credible scientists and institutions;  e) Ensure compliance with applicable state and federal laws for consultation, assessment, and mitigation including consultation with interested or affected Indian tribes;  f) Provide for stabilization, maintenance, and interpretation of selected sites for public enjoyment and education.	Heritage resources currently documented or projected to occur in the NCA are allocated and managed to the Use Allocations (as defined by <i>BLM Manual Section 8110.42 and Land Use Planning Handbook H-1601-1</i> ) that are consistent with the legislative mandates from OPLMA for the NCA: Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.  Heritage resources of scientific interest currently documented or projected to occur in the NCA are not allocated to Experimental Use or Discharged from Management, as these would not be consistent with the Congressionally-designated purposes for the NCA, as they relate to cultural and historical resources. See <b>Table 2-4</b> below for descriptions of each Use Allocation category.  Public awareness and appreciation of heritage resources is enhanced through education and volunteer stewardship opportunities.  Appropriate heritage resource sites or groups of sites are nominated for inclusion in the National Register of Historic Places (NRHP), whenever warranted.  The integrity of setting and place is conserved, protected, and restored in areas where natural and cultural resources combine to form an important heritage landscape.		
<b>Management Guidance Common to All Alternatives</b>			
As required by federal historic preservation laws, continue consultations with BLM, the Utah State Historic Preservation Officer (UTSHPO), American Indian Tribes, and other interested parties to inform and direct management decisions related to heritage resources.  Manage properties recommended as “potentially eligible” for inclusion in the NRHP as “eligible properties” until evaluative testing determines the status of that resource.  Complete implementation-level Cultural Resource Project Plans whenever warranted, in consultation with UTSHPO, American Indian Tribes, and other interested parties.			
<b>Management Actions</b>			
No similar action.	Conduct regular site monitoring and site condition assessments utilizing BLM staff and trained volunteer Site Stewards.		

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Prehistoric Habitation Sites, Campsites, or Specialized Activity Areas:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of these NRHP- eligible sites for Scientific Use and Conservation for Future Use.	Allocate and manage 100% of these NRHP-eligible site types for Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.
No similar action.	General Management Actions:  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.  Prohibit geocaching in prehistoric habitation sites, campsites, or specialized activity areas.		
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of the actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at intensively visited Public Use sites;  c) Install on-site informational signing on site etiquette and ARPA;  d) Perform surface collection of artifacts on all sites allocated to Public Use;  e) Prioritize Class III inventory in areas adjacent to Public Use sites.	NRHP- eligible prehistoric habitation sites, campsites, or specialized activity areas would not be managed for Public Use over the life of the RMP.	Same as Alternative B.



Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Traditional Use:			
No similar action.	NRHP- eligible prehistoric habitation sites, campsites, or specialized activity areas would not be managed for Traditional Use over the life of the RMP.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes to direct management of Traditional Use sites.	
Rock Shelters, Alcoves, and Caves with Cultural Materials:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Traditional Use.  Allocate and manage 100% of rock shelters, alcoves, and caves identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.  Allocate and manage identified Traditional Cultural Properties for Traditional Use.		
No similar action.	General Management Actions:  Prioritize Class III inventory in areas with high potential for this site type to occur.  Conduct regular site monitoring, utilizing BLM staff and trained volunteer Site Stewards.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Prohibit geocaching in all Rock Shelters, Alcoves, and Caves with Cultural Materials.		
Scientific Use:			
No similar action.	Authorize data recovery excavation with appropriate research design which maximizes conservation of the site resources for future use and Native American and public involvement in the research.  Complete NRHP nominations for Scientific Use sites on a priority basis as identified in Cultural Resource Project Plans.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		
Toolstone Sources or Quarries:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use and Conservation for Future Use.	Same as Alternative B.
No similar action.	General Management Actions:  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Prioritize Class III inventory in areas with high potential for this type of site to occur.  Develop Cultural Resource Project Plans that include management direction related to the collection of non-artifact geologic materials from source/quarry locations.		

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of the actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at intensively visited Public Use sites;  c) Install on-site informational signing on site etiquette and ARPA;  d) Perform surface collection of artifacts on all sites allocated to Public Use;  e) Prioritize Class III inventory in areas adjacent to Public Use sites.	NRHP- eligible toolstone sources or quarries would not be managed for Public Use over the life of the RMP.	Same as Alternative B.
Rock Art Sites:			
No similar action.	Allocate and manage 100% of NRHP-eligible sites for Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.	Allocate and manage 100% of NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Traditional Use.	Same as Alternative B.
No similar action.	Allocate and manage rock art sites with evidence of public visitation for Scientific Use, Public Use, and Traditional Use.	Allocate and manage rock art sites with evidence of public visitation for Scientific Use and Traditional Use.	Same as Alternative B.
No similar action.	Allocate and manage rock art sites with no evidence of public visitation for Conservation for Future Use and Traditional Use.	Allocate and manage rock art sites with no evidence of public visitation for Conservation for Future Use.	Allocate and manage rock art sites with no evidence of public visitation for Scientific Use, Conservation for Future Use, and Traditional Use.

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Allocate and manage rock art sites identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.		
No similar action.	<p>General Management Actions:</p> <p>Prioritize Class III inventory in areas with high potential for this site type to occur.</p> <p>Conduct regular site monitoring, utilizing BLM staff and trained volunteer Site Stewards.</p> <p>Professionally document all rock art sites by photographing, mapping, and developing detailed measured drawings of all elements and cultural materials using the best available technology.</p> <p>Manage all rock art sites as “eligible properties” for inclusion in the NRHP.</p> <p>Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.</p> <p>Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.</p> <p>Install informational signing on site etiquette and ARPA where evidence of public use exists.</p> <p>Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.</p> <p>Prohibit geocaching in all Rock Art Sites.</p>		
Scientific Use:			
No similar action.	<p>Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.</p> <p>Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.</p>		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	<p>Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:</p> <p>a) Develop on and off-site interpretation for intensively visited Public Use sites;</p> <p>b) Install visitor registers at intensively visited Public Use sites;</p> <p>c) Install on-site informational signing on site etiquette and ARPA;</p> <p>d) Perform surface collection of artifacts on all sites</p>	NRHP- eligible rock art sites would not be managed for Public Use over the life of the RMP.	Same as Alternative B.

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	allocated to Public Use;  e) Prioritize Class III inventory in areas adjacent to Public Use sites;  f) Develop trails, viewing platforms, passive barriers, or other facilities to manage visitor uses and protect resource values at intensively visited Public Use sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		
<i>Ethno-historic Sites, Sacred Sites, Traditional Cultural Properties, Traditional Use Areas:</i>			
No similar action.	Allocate and manage 100% of NRHP-eligible ethno-historic sites for Scientific Use, Conservation for Future Use, Public Use, and/or Traditional Use.  Allocate and manage 100% of Traditional Cultural Properties and Traditional Use Areas for Conservation for Future Use and Traditional Use.  Allocate and manage 100% of sites identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.		
No similar action.	General Management Actions:  Develop detailed site records of all identified ethno-historic sites, Sacred Sites, Traditional Cultural Properties, and Traditional Use Areas.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Conduct regular site monitoring, utilizing BLM staff and trained volunteer Site Stewards.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.  Prohibit geocaching in all Ethno-historic Sites, Sacred Sites, Traditional Cultural Properties, and Traditional Use Areas.		
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.  Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and traditional heritage values of sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		



Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Historic Roads, Trails, Highways, and Associated Travel-related Sites and Features:</i>			
No similar action.	Allocate and manage 100% of these NRHP-eligible properties for Scientific Use, Conservation for Future Use, and Public Use.		
No similar action.	General Management Actions:  Complete Class III level inventory of the travel corridor for each site to establish baseline data on linear heritage resources and associated travel-related sites and features.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Conduct regular site monitoring, utilizing BLM staff and trained volunteer Trail Stewards.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Prohibit geocaching in all Associated Travel-related Sites and Features.		
Scientific Use:			
No similar action.	Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.  Prepare a historic context for each resource as prioritized by Cultural Resource Project Plans.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.  Emphasize conservation of setting and place in management actions identified in Cultural Resource Project Plans.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of the actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at intensively visited Public Use sites;  c) Install on-site informational signing on site etiquette and ARPA;  d) Install roadside markers and directional signing;  e) Prepare visitor use maps and driving, biking, and hiking guides;  f) Construct pullouts and wayside exhibits with visitor amenities (e.g., restrooms, information kiosks), where appropriate.		
<i>Historic Mining, Ranching/Farming/Livestock Grazing Sites, Buildings, Standing Structures, and Landscapes:</i>			
No similar action.	Allocate and manage 100% of NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.		
No similar action.	General Management Actions:  Complete appropriate scale Class III level inventory to identify all associated sites, features, and structures.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Conduct regular site monitoring, utilizing BLM staff and trained volunteer Trail Stewards.  Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.		

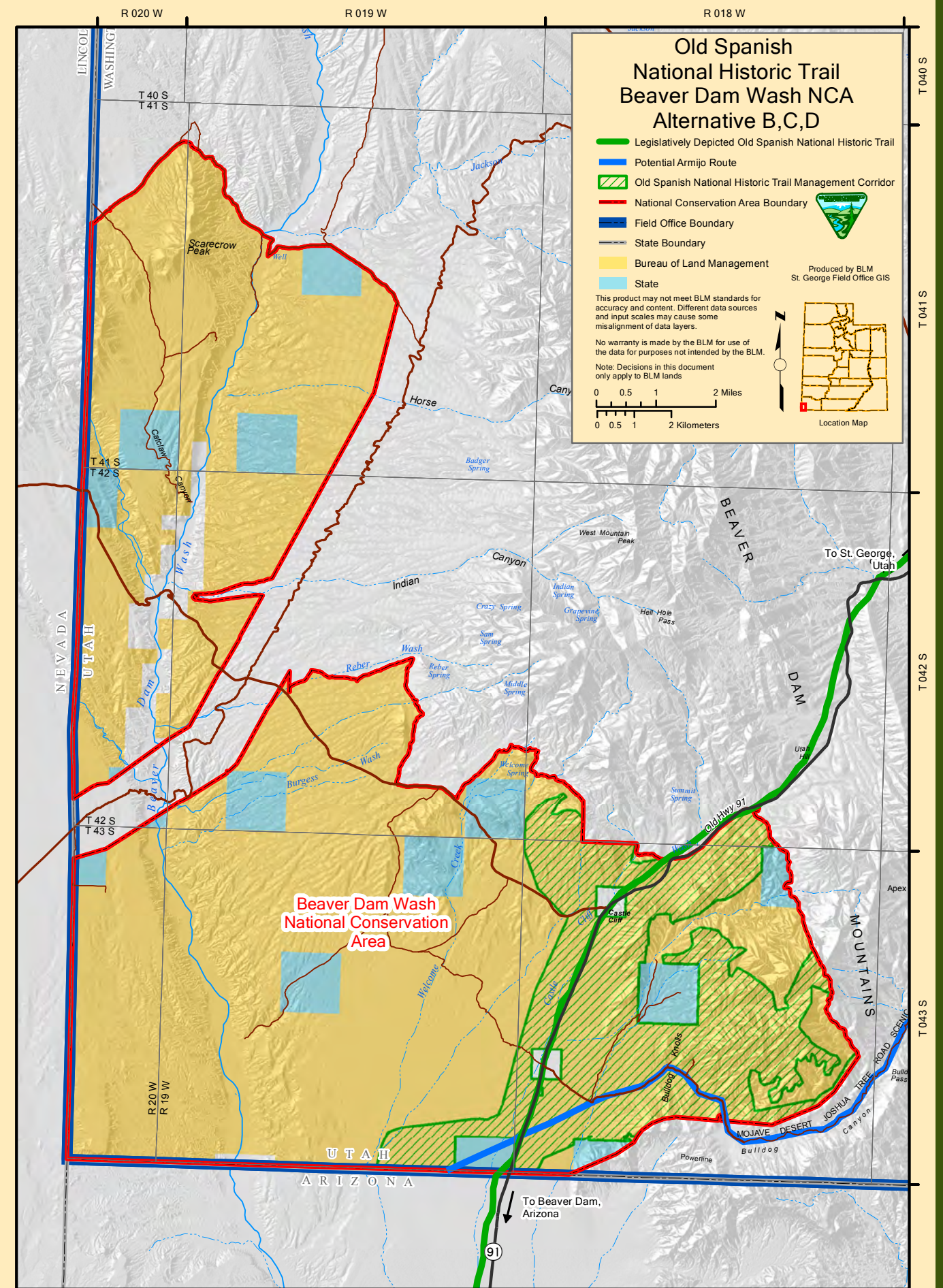
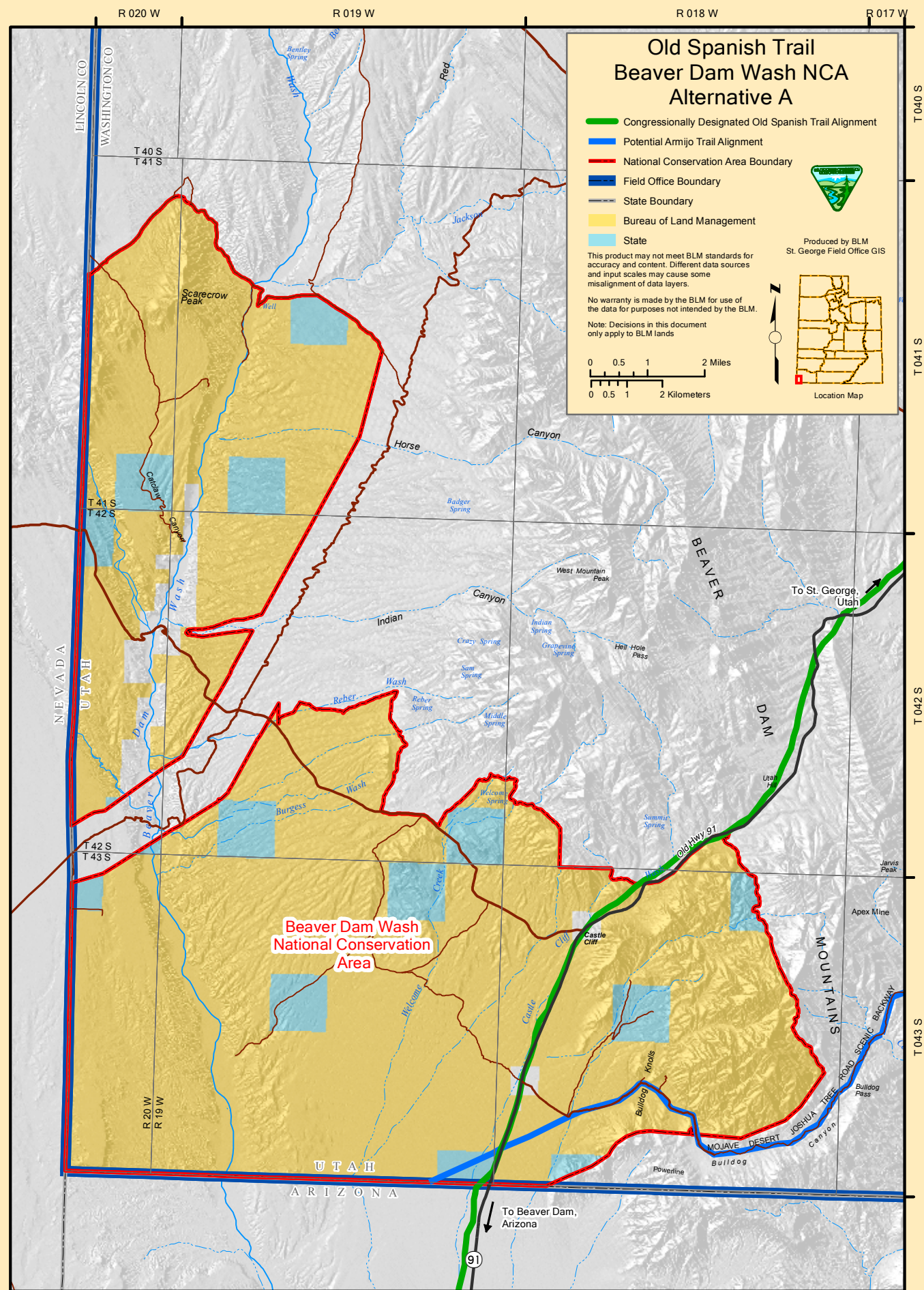
Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	Prohibit geocaching in all Historic Mining, Ranching/Farming/Livestock Grazing Sites, Buildings, and Standing Structures.		
Scientific Use:			
No similar action.	Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.  As prioritized by Cultural Resource Project Plans: a) Complete an intensive archaeological inventory of the resources to collect baseline data; b) Collect oral histories; c) Prepare a historic context for each site; d) Develop photo documentation of historic buildings, structures, features, and landscapes; e) Complete Level 1 Historic American Building Survey (HABS) documentation, including elevations, plans, measured drawings, photos; f) Complete appropriate level Historic American Landscape Survey (HALS) documentation, where warranted.		
Conservation for Future Use:			
No similar action.	Emphasize conservation of setting and place in management actions identified in Cultural Resource Project Plans.  Perform stabilization and/or rehabilitation of buildings or standing structures as prioritized by Cultural Resource Project Plans.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites to increase public awareness and appreciation of historic period mining, ranching and agricultural activities in the NCA; b) Install visitor registers at intensively visited Public Use sites; c) Install on-site informational signing on site etiquette and ARPA; d) Perform surface collection of artifacts on all sites allocated to Public Use; e) Prioritize Class III inventory in areas adjacent to Public Use sites.		
Public Education and Interpretation			
BLM will collaborate with local communities, organizations, local and state agencies, Indian tribes, and other interested parties in developing and implementing plans for the restoration, stabilization, protection, and/or interpretation of appropriate historical, archaeological, or paleontological sites and resources on public lands in Washington County.	Develop heritage tourism sites focusing on appropriate types of sites that have been identified for Public Use.  Sponsor educational programs for school groups, civic organizations, elected officials, and public land user groups that increase public appreciation for the unique and irreplaceable heritage resources of the NCA.  Sponsor trainings and information dissemination to youth and scout groups, recreational user groups, and the general public about programs like Tread Lightly and Leave No Trace that help to protect heritage resources.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on heritage resources and appropriate site etiquette when visiting Public Use sites.  Promote opportunities for volunteer involvement in Site Stewardship and Docent programs that increase public awareness of the need to conserve and protect heritage resources.  Recruit and train youth and veteran groups, citizen stewards, and other volunteers to		

Table 2-24 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	participate in site clean-up and restoration, as well as archaeological inventory and data recovery projects that enhance public understanding of regional cultural history and the heritage values of the NCA.		
Scientific Research			
No similar action.	Scientific research is encouraged that improves baseline knowledge and general understanding of cultural and historical resources of the NCA.  Research will be authorized at sites allocated to Scientific Use, as described above by the specific type of site.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific research studies at sites allocated to Scientific Use to collect paleo-environmental data that can serve as a baseline for comparison with modern climate trends.		

Table 2-25 National Historic Trails (Old Spanish National Historic Trail )

Table 2-25 National Historic Trails (Old Spanish National Historic Trail)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Fulfill the conservation and public purposes for which Congress designated the Old Spanish Trail (OST) to the National Trails System through Public Law 107-325 in 2002.		
Objectives			
No similar action.	Establish an OST National Historic Trail Management Corridor that provides diverse opportunities for the public to connect with and experience trail history and resources.  Manage the OST National Historic Trail Management Corridor to identify, conserve, and protect the historic trail and historic remnants and artifacts for their historic, scientific, educational, interpretative, and recreational values.  Manage the OST National Historic Trail Management Corridor to conserve and protect the associated visual setting and natural landscape elements that are evocative of the period of trail significance and contribute to resource protection.  Manage the OST National Historic Trail Management Corridor to restore altered natural landscape elements of the associated setting to trail-era condition.  Enhance opportunities for shared OST stewardship through partnerships with the Old Spanish Trail Association, American Indian Tribes, state, county, and municipal governments, private landowners, and other groups and organizations.		
Management Guidance Common to All Alternatives			
<p>“Subject to valid existing rights, all Federal land located in the NCA, including any land subsequently acquired by the United States, is withdrawn from all forms of entry, appropriation, and disposal under the public land laws and entry and patenting under the mining laws” (OPLMA Section 1975).</p> <p>“Any land or interest in land that is located in the National Conservation Area that is acquired by the United States shall (1) become part of the National Conservation Area; and be (2) managed in accordance with the Federal Land Policy and Management Act of 1976 (USC 1701 et seq.; OPLMA Section 1975; and any other applicable laws (including regulations)” (OPLMA Section 1975 (f)).</p> <p>Public lands within a National Trail Management Corridor will be retained in federal ownership, in accordance with Section 203 of FLPMA, as classified in accordance with 43 CFR 2420.</p> <p>Do not authorize commercial renewable energy (e.g., wind, solar) leases or ROWs in the NCA.</p> <p>Existing ROWs will be maintained in accordance with the respective ROW grant or other applicable authorization.</p> <p>As funding and staffing permit, conduct inventories in the NCA to identify the historic trail and historic remnants and artifacts and the associated visual setting and natural landscape elements that are evocative of the period of trail significance and contribute to resource protection.</p>			
Management Actions			
In collaboration with local communities, historical associations, and interested government agencies, BLM will assist in marking and signing portions of the Spanish Trail that cross public lands in Washington County (Map 2-3).	Establish the OST National Historic Trail Management Corridor, comprised of approximately 12,506 acres of public land in the NCA (Map 2-4).		
OST: VRM Class III. (SGFO RMP Map 2.14)	Designate the OST National Historic Trail Management Corridor (12,506 acres) as VRM Class II.	Designate 4,962 acres of the OST National Historic Trail Management Corridor as VRM Class I (Map 2-5).  Designate 7,544 acres of the	Same as Alternative B.







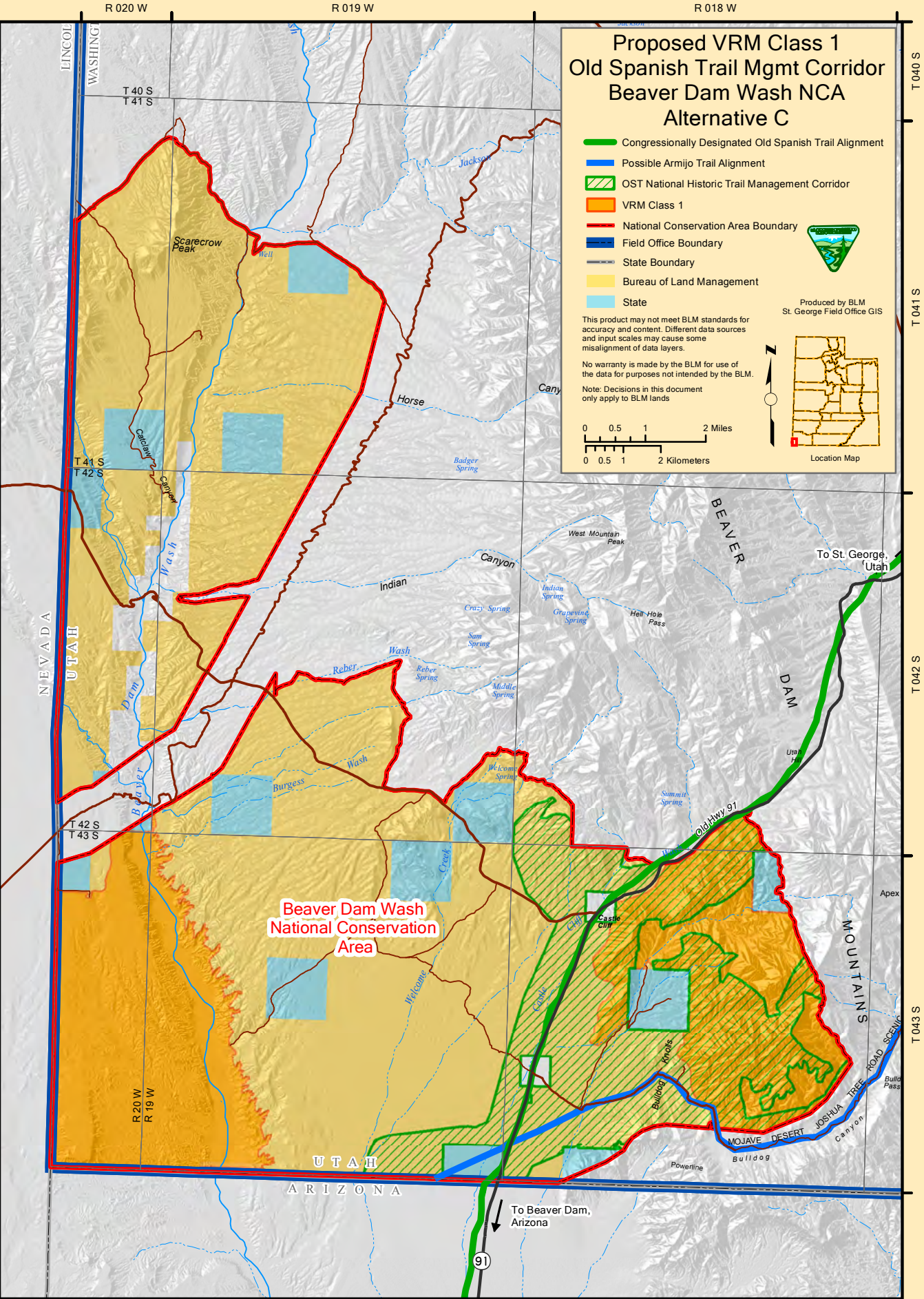


Table 2-25 National Historic Trails (Old Spanish National Historic Trail)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		OST National Historic Trail Management Corridor as VRM Class II.	
Avoidance area: 63,284 acres (SGFO RMP Map 2.3) Exclusion area: 0 acres (SGFO RMP Map 2.2) Designated ROW Corridor: 196 acres (Map 2-22)	Manage the OST National Historic Trail Management Corridor as a ROW Exclusion area, outside of the designated utility and transportation corridor through the NCA that follows the route of Old Highway 91, subject to valid existing rights.	Manage the OST National Historic Trail Management Corridor as a ROW Exclusion area, subject to valid existing rights.	Same as Alternative B.
Designated Utility Corridor: Following the route of Old Highway 91 across the Beaver Dam slope from the Arizona border to the Shivwits Indian Reservation, then from the northern boundary of the Shivwits Indian Reservation to Gunlock Reservoir following the Gunlock road. This corridor would be the width of the currently fenced road ROWs. (SGFO RMP Table 2-2) (SGFO RMP Map 2.2) Designated ROW Corridor: 196 acres. (Map 2-22)	Continue to manage a designated utility and transportation corridor through the NCA that follows the route of Old Highway 91. Establish the width of that designated corridor to be 100 feet in total width, 50 feet from either side of the centerline of the current highway (total of 60 acres). Limit new utility ROWs to subsurface installations within that 100 foot wide designated corridor to minimize the potential for development-related visual impacts to associated setting of the OST within the OST National Historic Trail Management Corridor.	Revoke the designated utility and transportation corridor through the NCA that follows the route of Old Highway 91 and defined as the width of the currently fenced road ROW. Continue to recognize valid existing rights within the corridor.	Continue to manage a designated utility and transportation corridor through the NCA that follows the route of Old Highway 91. Establish the width of that designated corridor to be 200 feet in total width, 100 feet from either side of the centerline of the current highway (total of 128 acres). Limit new utility ROWs to subsurface installations within that 200 foot wide designated corridor to minimize the potential for development-related impacts to OST resources, values, uses, and associated setting within the OST National Historic Trail Management Corridor.
Open to Cross Country OHV use: 0 acres Limited to Existing Routes: 0 acres Limited to Designated: 63,480 acres Closed to OHV use: 0 acres (SGFO RMP Map 2.13) (Map 2-21)	Prior to completion of the TMP, OHV area designations for the OST National Historic Trail Management Corridor would be as follows: Open to Cross Country OHV use: 0 acres Limited to Existing Routes: 0 acres Limited to Designated Routes: 12,506 acres Closed to OHV use: 0 acres Following completion of the TMP, manage the 12,506 acre OST National Historic Trail Management Corridor as Limited to Designated Routes for OHV use.		
No similar action.	Manage for heritage tourism and auto touring along Old Highway 91 and along the Mojave Desert—Joshua Tree Scenic By-way, providing interpretation at Welcome or Orientation pullouts and/or wayside exhibits.		



Table 2-25 National Historic Trails (Old Spanish National Historic Trail)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	With partners (e.g., user groups, trail organizations), design and construct a non-motorized trail to provide retracement opportunities within the OST National Historic Trail Management Corridor along Old Highway 91 and the Mojave Desert—Joshua Tree Scenic By-way.	With partners (e.g., user groups, trail organizations), design and construct a non-motorized trail to provide retracement opportunities within the OST National Historic Trail Management Corridor along the Mojave Desert—Joshua Tree Scenic By-way.	Same as Alternative B.
No similar action.	To improve the naturalness of the setting and the visitor experience of the landscape, all identified social trails and redundant routes within OST National Historic Trail Management Corridor would be closed and rehabilitated with native vegetation to trail-era condition.		
No similar action.	To improve the naturalness of the setting and the visitor experience of the landscape, restore fire damaged landscapes within the OST National Historic Trail Management Corridor with native vegetation to trail-era condition.		
No similar action.	Utilize objectives, processes, and guidance from the Comprehensive Administration Strategy for the Old Spanish National Historic Trail to direct future studies and associated site and route segment-specific management plans.		

Table 2-26 Joshua Tree National Natural Landmark

Table 2-26 Joshua Tree National Natural Landmark			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Fulfill the conservation and public purposes for which NPS registered the Joshua Tree National Natural Landmark (NNL) to the national system in 1966.		
Objectives			
BLM will seek to maintain the values associated with the Joshua Tree National Natural Landmark and the Woodbury Desert Study Area and support additional research related to the management of desert ecosystems in the area.	Native perennial and annual communities exhibit species diversity, suitable canopy cover, plant density, and age class diversification appropriate to each ecological site type.		
	Minimize loss to wildfire of late-successional desert shrublands (e.g., Joshua tree woodlands, blackbrush communities), perennial understory vegetation, and soil crusts through management actions to prevent wildfires, appropriately wildfire suppression, and control or eradication of non-native invasive annual grass species.		
	Research is supported that increases the understanding of ecosystem processes (e.g., vegetation succession), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., livestock grazing, recreation) that affect vegetation communities and that may influence climate change.		
	Public awareness, appreciation, and stewardship of Joshua trees and other native vegetation are enhanced through education, interpretation, and volunteer stewardship opportunities.		
Management Actions Common to All Alternatives			
Continue to monitor the Joshua tree community and other native vegetation in the NNL in partnership with NPS.			
Management Actions			
No similar action. (Map 2-6)	Coordinate with NPS to revoke the NNL registration at its current location and identify an area within the NCA that better exemplifies an undamaged mature Joshua tree community for registration by NPS to the NNL System.		
No similar action.	No similar action.	Public lands of the NCA are unavailable for livestock grazing over the life of the RMP.	No similar action.
Joshua Tree NNL: VRM Class III. (SGFO RMP Map 2.14)	Designate the NNL as VRM Class II. Allow construction of facilities that support interpretative opportunities.		
Joshua Tree NNL: Avoidance area for all ROWs. (SGFO RMP Map 2.3)	Manage the NNL as an Exclusion area for all types of ROWs.		
No similar action.	Manage the NNL for public visitation targeting nature photography, hiking, and horseback riding.		
No similar action.	Close and rehabilitate social trails within NNL to improve the naturalness of the setting and the visitor experience of the Mojave Desert landscape.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about the resource values of the NNL and appropriate public land use etiquette to protect native vegetation communities and prevent wildfires.		
Scientific Research			
No similar action.	Pursue opportunities for studies of post-fire recruitment of Joshua trees in the NNL.  Pursue opportunities for studies of the distribution and abundance of yucca moths, native bees, and other pollinators in the NNL.		





BDWNCA

## Chapter 2



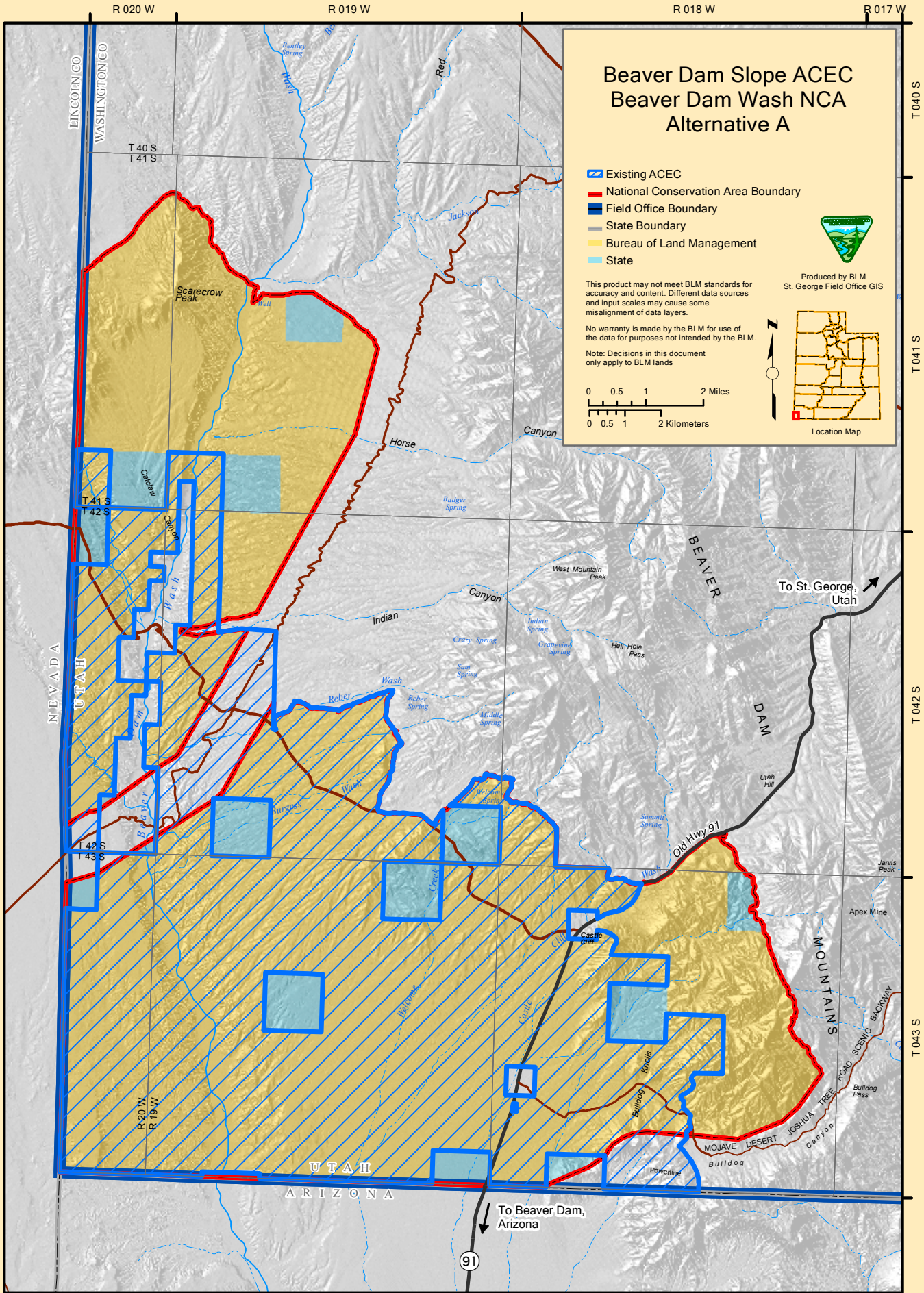
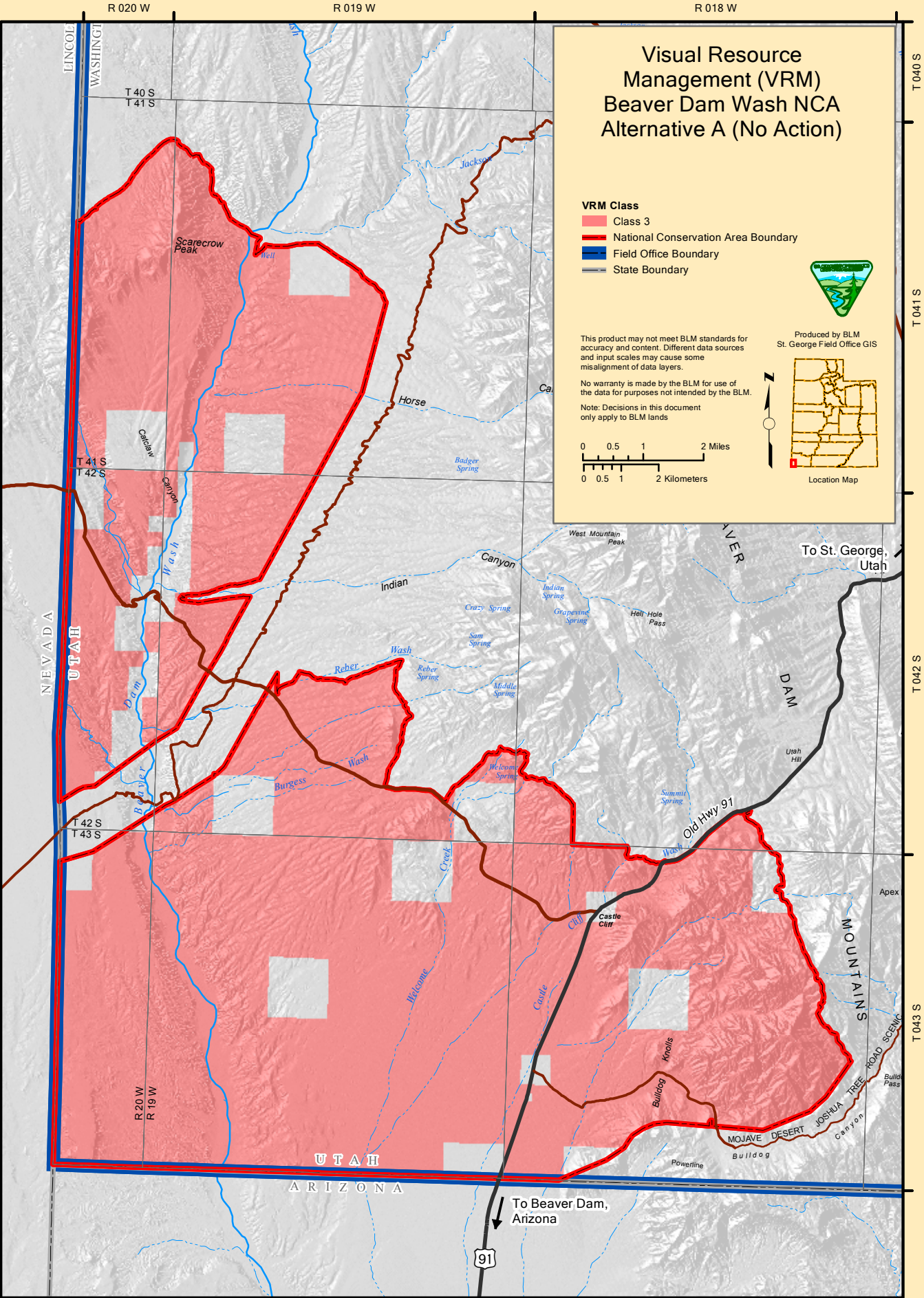


Table 2-28 Visual Resource Management (VRM)

Table 2-28 Visual Resource Management (VRM)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	The open spaces, natural aesthetics, and scenic vistas of the NCA are protected for social, economic, and environmental benefits.		
<b>Objectives</b>			
BLM’s objective will be to manage the public lands in such a way as to preserve those scenic vistas which are deemed to be most important:  a) In their impact on the quality of life for residents and communities in the area;  b) In their contribution to the quality of recreational visitor experiences;  c) In supporting the regional tourism industry and segments of the local economy dependent on public land resources.  Moreover, BLM will seek to complement the rural, agricultural, historic, and urban landscapes on adjoining private, state, and tribal lands by maintaining the integrity of background vistas on the public lands.	Visual quality and integrity are maintained in accordance with established VRM Class criteria:  <i>Class I Objective:</i> The existing character of the landscape is preserved. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.  <i>Class II Objective:</i> The existing character of the landscape is retained. The level of change to the characteristic landscape should be low. Changes can be seen but should not attract the attention of the casual viewer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.  <i>Class III Objective:</i> The existing character of the landscape is partially retained. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.  <i>Class IV Objective:</i> Not applicable to the NCA.		
<b>Management Actions</b>			
No similar action.	Use architectural design standards that create a unique and recognizable identity for the NCA. The standards would include, but are not limited to: fencing design, signage requirements, vegetative screening, siting requirements, and the height, shape, and color of proposed structures.		
No similar action.	Incorporate visual and architectural design considerations during the project design phase for all new surface disturbing projects or activities, regardless of size or potential impact.		
No similar action.	Conduct ecosystem restoration projects that meet VRM objectives for the NCA over the long-term (over the anticipated life of the restoration project). In the short term (5 years or less) or the mid-term (5-10 years), VRM objectives for restoration projects in the NCA would not have to be met.		
No similar action.	Use the best available technology to minimize light emissions from all authorized facilities.		
No similar action.	Retroactively prioritize and apply architectural design standards to existing structures and facilities.		
No similar action.	Reduce or prevent impacts to night skies through the application of specific mitigation measures. These measures could include, but are not limited to: directing all light emissions downward, using shielded light sources, using only the minimum illumination necessary, using light sources less prone to atmospheric scattering, and using circuit timers or motion sensors.		



Table 2-28 Visual Resource Management (VRM)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
VRM Class I: 0 acres VRM Class II: 0 acres VRM Class III: 63,480 acres VRM Class IV: 0 acres (SGFO RMP Map 2.14) (Map 2-8)	Manage the NCA as follows: VRM Class I: 0 acres VRM Class II: 63,480 acres VRM Class III: 0 acres VRM Class IV: 0 acres (Map 2-9)	Manage the NCA as follows: VRM Class I: 16,564 acres VRM Class II: 46,916 acres VRM Class III: 0 acres VRM Class IV: 0 acres (Map 2-10)	Same as Alternative B. (Map 2-9)





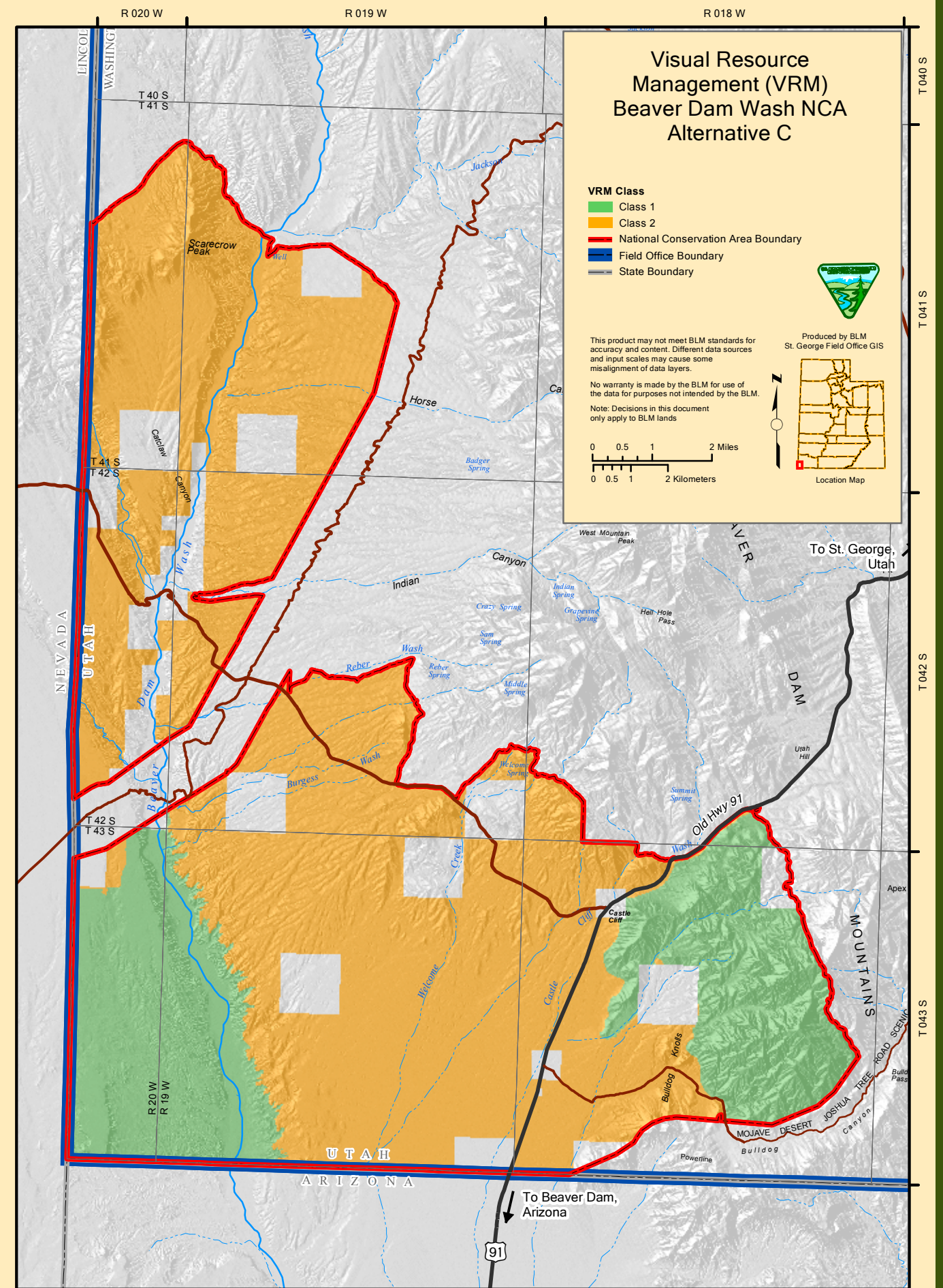
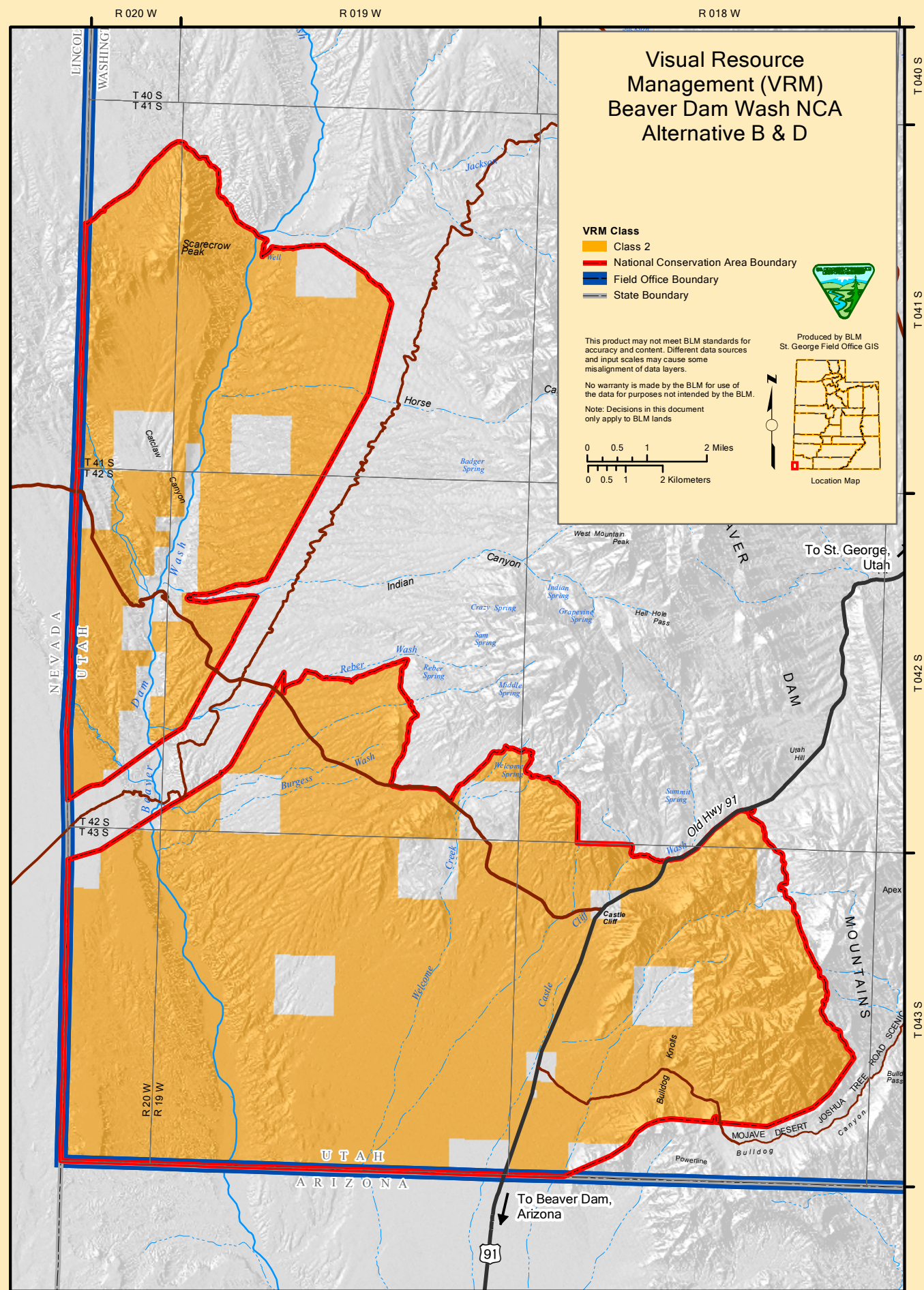


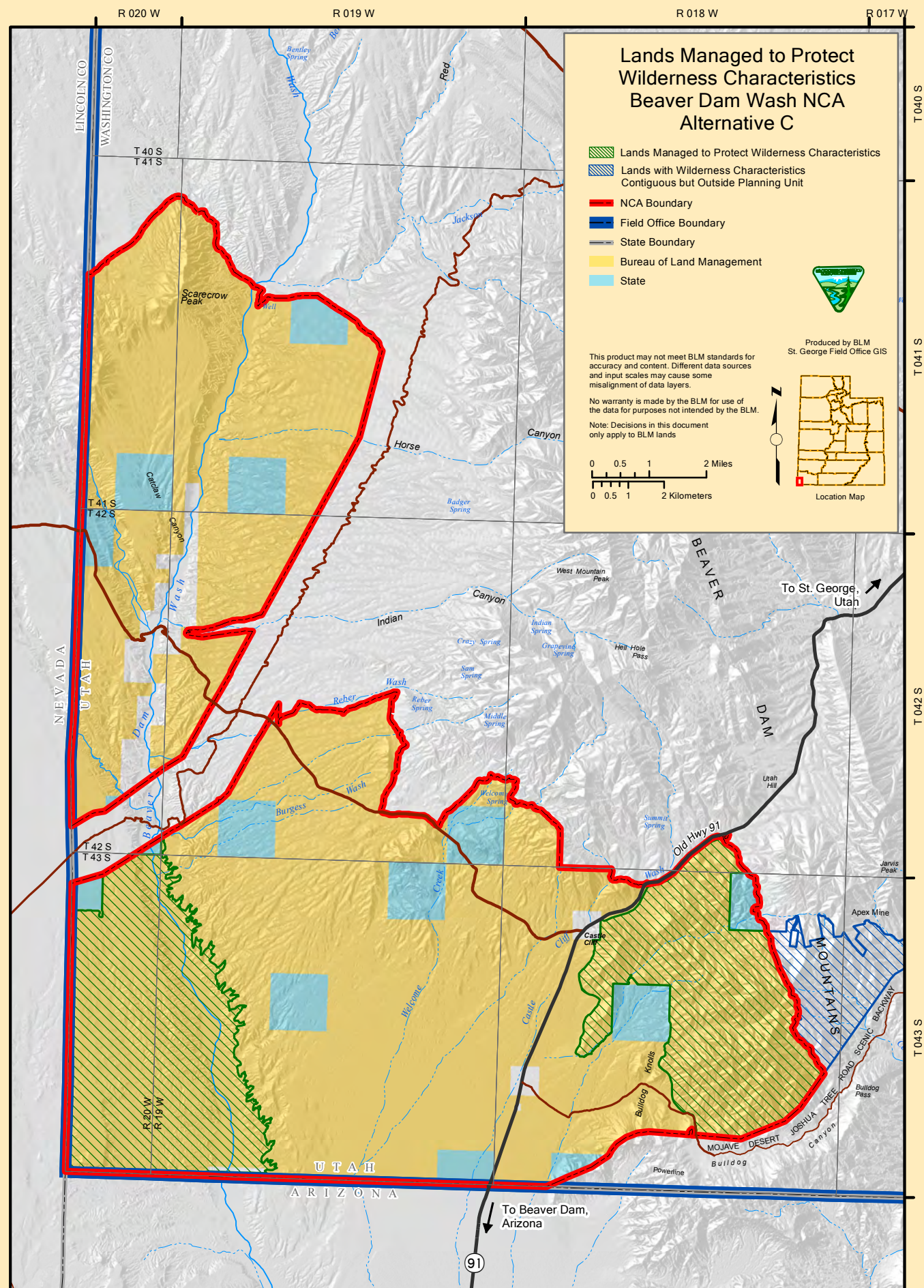
Table 2-29 Natural Soundscapes

Table 2-29 Natural Soundscapes			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Public land users can experience natural soundscapes in the NCA.		
Objectives			
No similar action.	Land uses and authorized activities are managed to conserve and protect natural soundscapes.		
Management Actions			
No similar action.	Identify and provide opportunities for visitors to enjoy the atmosphere of peace and tranquility afforded by the natural soundscapes of the NCA.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on increasing public awareness of natural quiet and the benefits of protecting natural soundscapes where they are present in the NCA.		
Scientific Research			
No similar action.	Identify appropriate acoustic monitoring locations in the NCA using established protocols.  Install sound level meters and supporting hardware to collect, analyze, and determine the levels and types of natural sounds in the NCA and to identify potential anthropogenic sources of soundscape impacts.		

Table 2-30 Lands with Wilderness Characteristics

Table 2-30 Lands with Wilderness Characteristics			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Lands with wilderness characteristics in the NCA are managed to conserve, protect, and restore those values.		
Objectives			
No similar action.	Inventory all lands with wilderness characteristics in the NCA.  Avoid potential project-related impacts through land use authorizations and project design.  Naturalness is conserved and protected through appropriate management actions.  Naturalness is restored in damaged areas through management actions to re-establish native vegetation communities.		
Management Actions			
No similar action.	Do not identify management prescriptions to specifically maintain lands with wilderness characteristics.	Manage 16,721 acres (Map 2-11) to protect lands with wilderness characteristics with the following prescriptions:  a) Manage as VRM Class I;  b) Manage as ROW Exclusion area;  c) Manage as Limited to Designated Roads and Trails for OHVs;  d) Do not authorize commercial and non-commercial woodland product harvest (e.g., pole, post, firewood cutting), or seed and plant material collection.	Same as Alternative B.





*Table 2-31 Recreation and Visitor Services*

Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
		High quality sustainable recreation opportunities and visitor services are provided. Those opportunities support the quality of life of NCA visitors as well as local communities, regional economies and the resource values of the NCA.	
<b>Objectives</b>			
BLM's objective for recreation management will be to provide an array of quality recreation experiences within the agency's capability and logical recreation niche to meet the reasonable needs and expectations of local residents and visitors from outside the area. Because the fiscal and staffing resources available to BLM are likely to remain inadequate to fully accomplish this objective, BLM will use innovative partnerships, pursue grant monies, and work with volunteers, organized user groups, and other recreation providers in developing and managing selected recreation opportunities on the public lands.		Protect NCA resource and recreation values using the following: <ul style="list-style-type: none"> <li>a) Trail and facility design;</li> <li>b) Directional, informational, regulatory, traffic control, boundary, and trail signs;</li> <li>c) Maps and associated digital technology;</li> <li>d) Appropriate law enforcement;</li> <li>e) Interpretative materials and educational programs;</li> <li>f) Citizen stewardship.</li> </ul>	
<b>Recreation Management Areas: Management Actions</b>			
Extensive Recreation Management Areas are those public land areas where recreation management is only one of several management programs applied to the land and where recreation is typically extensive and unstructured in character. Such areas may contain occasional recreation sites such as the Baker Dam or Red Cliffs facilities. Emphasis will be placed on dispersed recreation, trail development, signing, maintenance of primitive and semiprimitive characteristics, management or abatement of natural and man-made hazards, and protection of resources and sites of recreational interest (Map 2-12).		Remove the Extensive Recreation Management Area (ERMA) administrative designation that overlaps the NCA.	



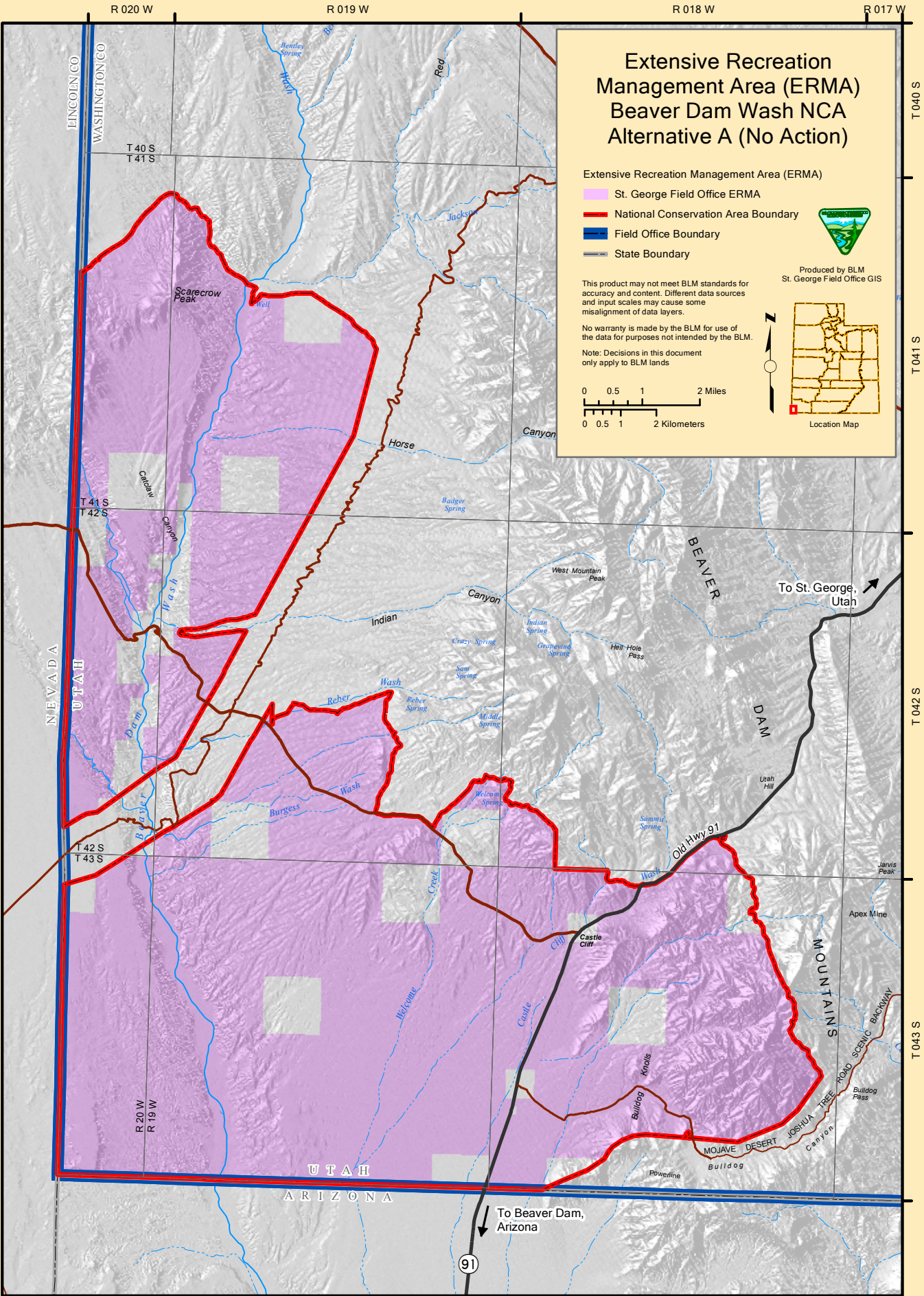
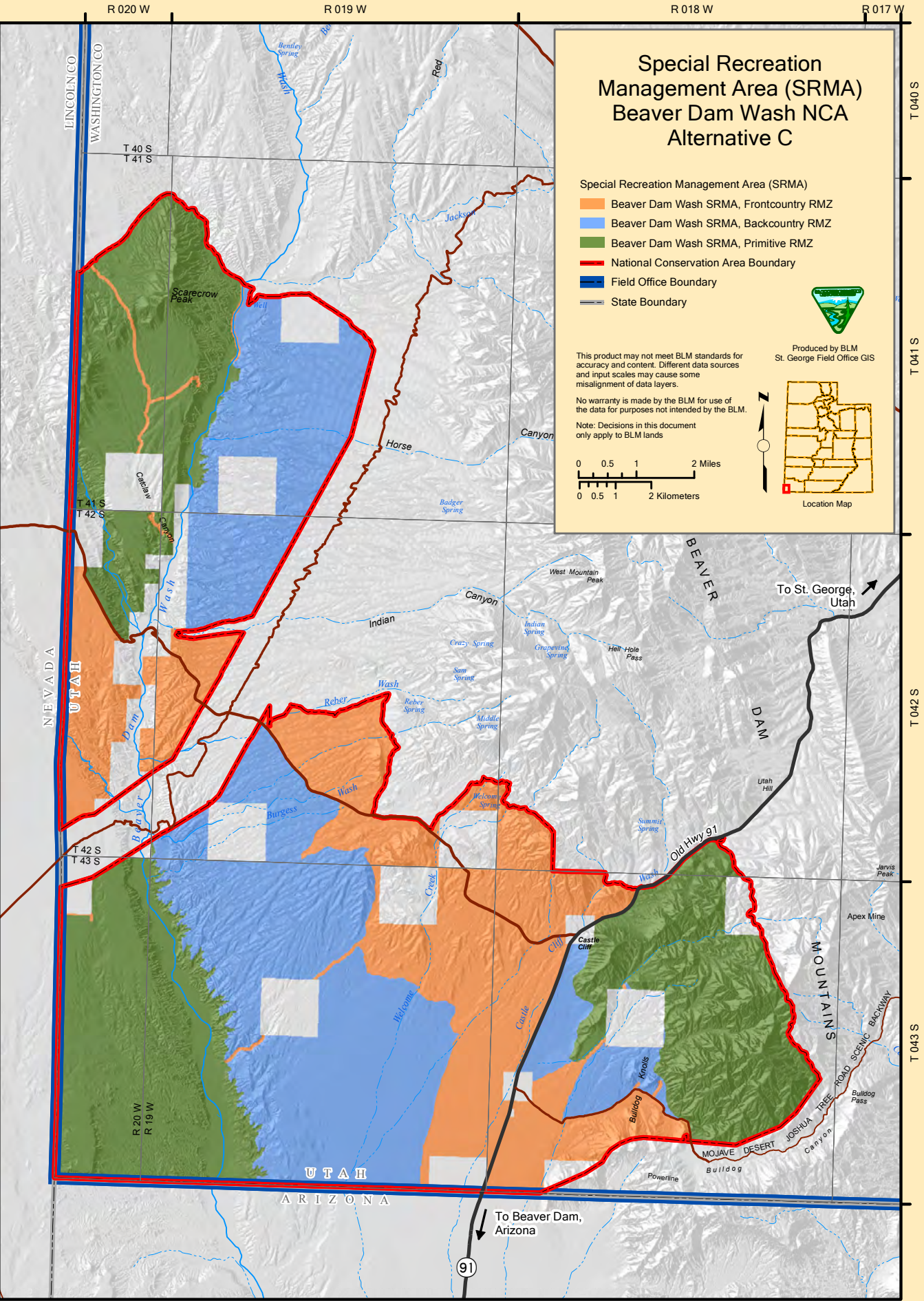
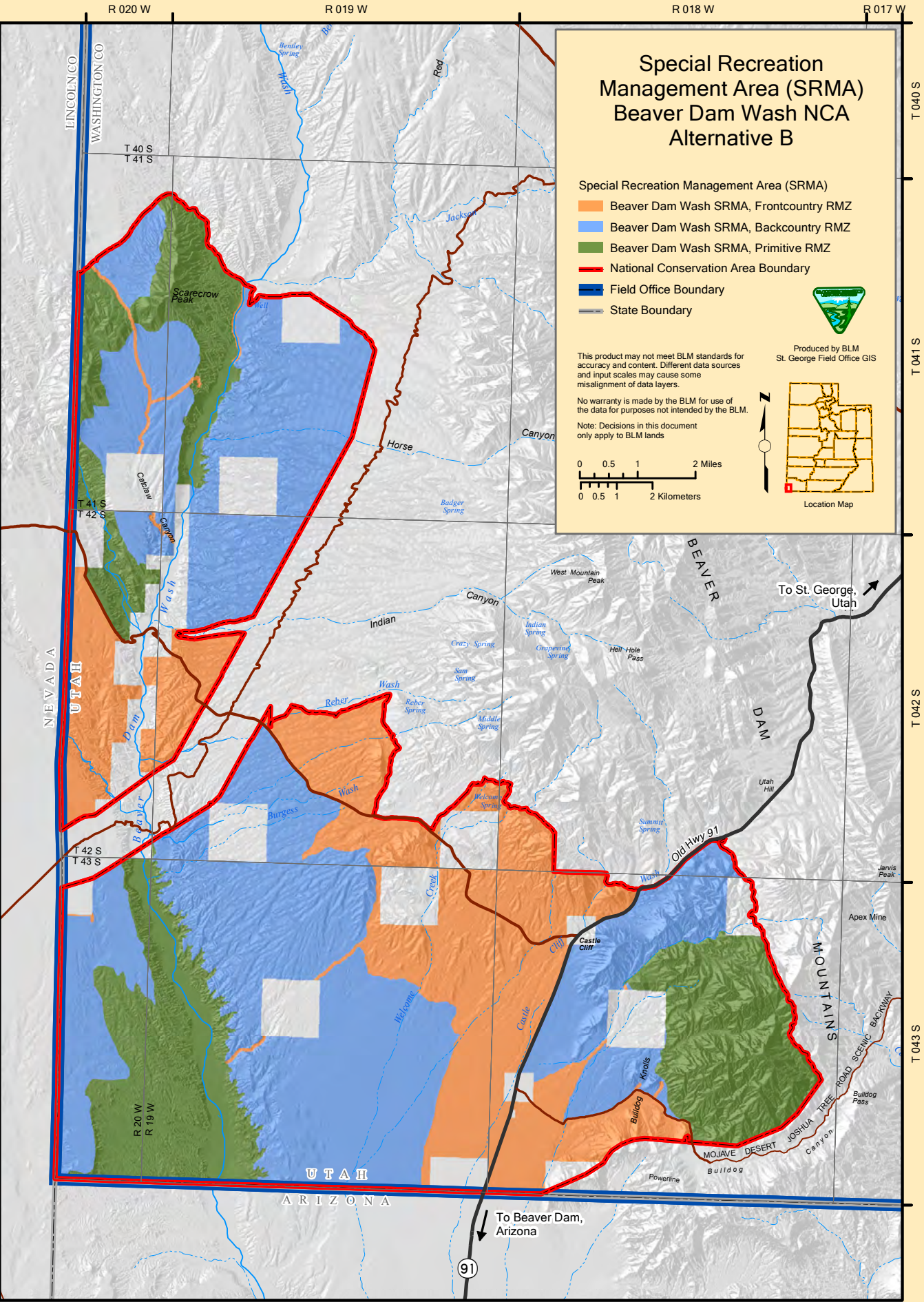


Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Establish the Beaver Dam Wash Special Recreation Management Area (SRMA), as shown on Map 2-13, Map 2-14, and Map 2-15.		
No similar action.	Beaver Dam Wash SRMA, Recreation and Visitor Services Objectives:  Foster a sense of awareness and stewardship in recreational participants and local community partners to maintain recreation values in the NCA.  Provide opportunities for public land users to develop an understanding and appreciation of the NCA through on and off-site educational and interpretative materials.  Develop a nationally recognized non-motorized trail system that provides high quality opportunities for a wide range of recreational activities  Develop trailheads and waysides that share a signature design emblematic of the NCA		
No similar action.	Establish three Recreation Management Zones (RMZs) within the Beaver Dam Wash SRMA as management tools to assist in setting priorities for facilities development, maintenance, and law enforcement. Each RMZ would have consistent management objectives across Alternative but would vary in size. See Table 2-32 for information about each zone and Appendix H for detailed RMZ descriptions and objectives		
No similar action.	Manage the RMZs as follows:  Frontcountry Zone: 17,030 acres  Backcountry Zone: 30,179 acres  Primitive Zone: 16,271 acres (Map 2-13)	Manage the RMZs as follows:  Frontcountry Zone: 17,030 acres  Backcountry Zone: 21,422 acres  Primitive Zone: 25,028 acres (Map 2-14)	Manage the RMZs as follows:  Frontcountry Zone: 17,030 acres  Backcountry Zone: 46,450 acres  Primitive Zone: 0 acres (Map 2-15)
No similar action.	Allowable uses for other resources and programs within the SRMA are defined by the NCA legislation. Allowable recreation uses are defined by RMZ and can be found in Table 2-32 and Appendix H.		
No similar action.	Coordinate management of recreational activities and uses with adjacent federal agencies, tribal governments, and state, county, and municipal governments.		
No similar action.	Develop an implementation-level Recreation Area Management Plan (RAMP) to identify specific management actions for recreational activities and visitor services within the SRMA. The RAMP would include, but is not limited to:  a) Non-motorized trail system development and management;  b) Motorized route system management;  c) Rock climbing management;  d) Campground development and management;  e) Dispersed camping management;  f) Architectural design standards;  g) Recreational impact monitoring standards and procedures.  h) Commercial, competitive, and group use management.		
No similar action.	Develop concessionaire contracts, if necessary, to protect resource values, as well as provide for appropriate and sustainable recreation opportunities and visitor services.		
No similar action.	Manage any non-federal lands that may be acquired within the NCA in conformance with RMZ decisions for adjacent public lands.		
Special Recreation Permits (SRPs):			
No similar action.	Prohibit SRPs for competitive equestrian events in the NCA.		
No similar action.	Prohibit SRPs for competitive motorized events in the NCA.		







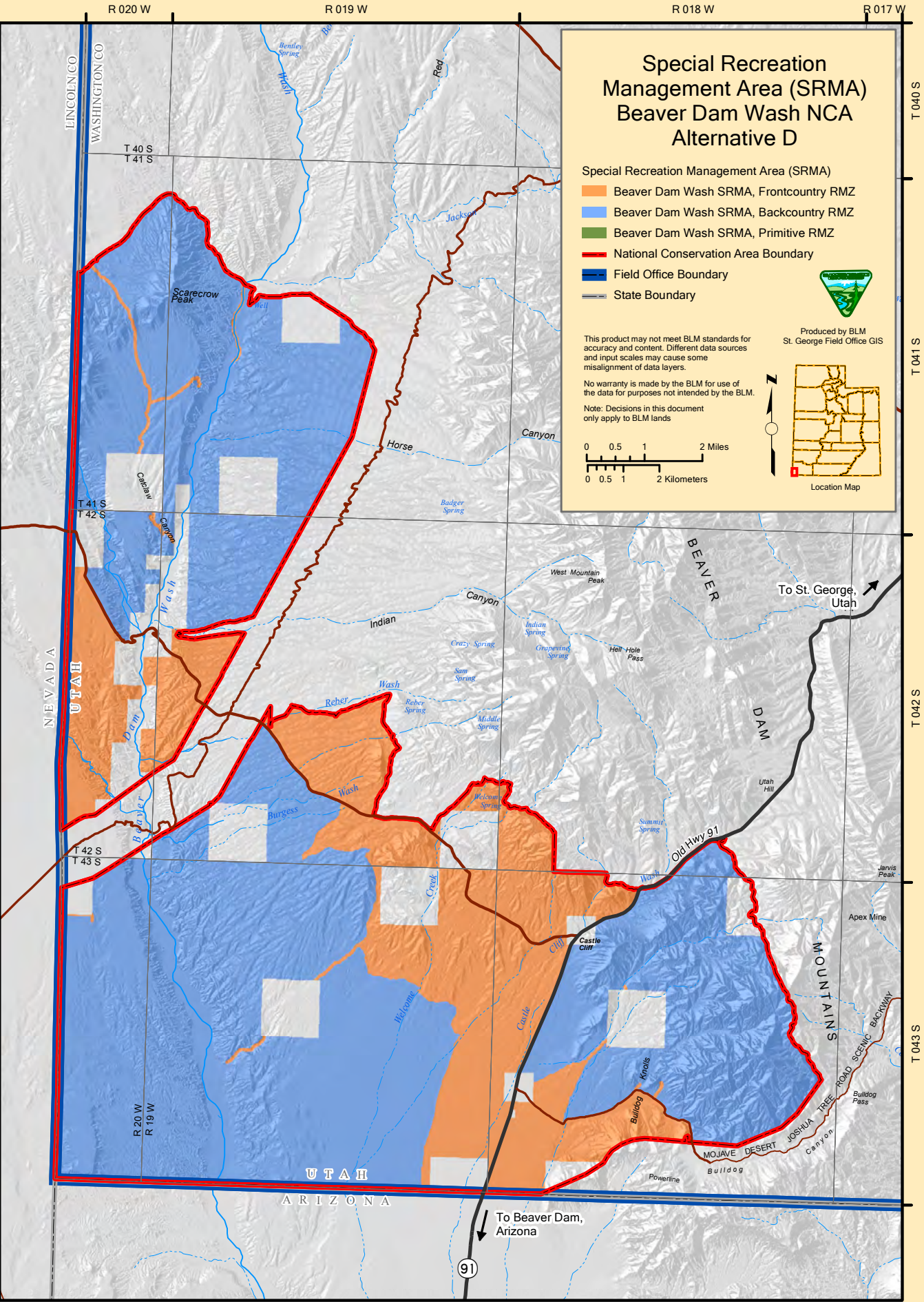
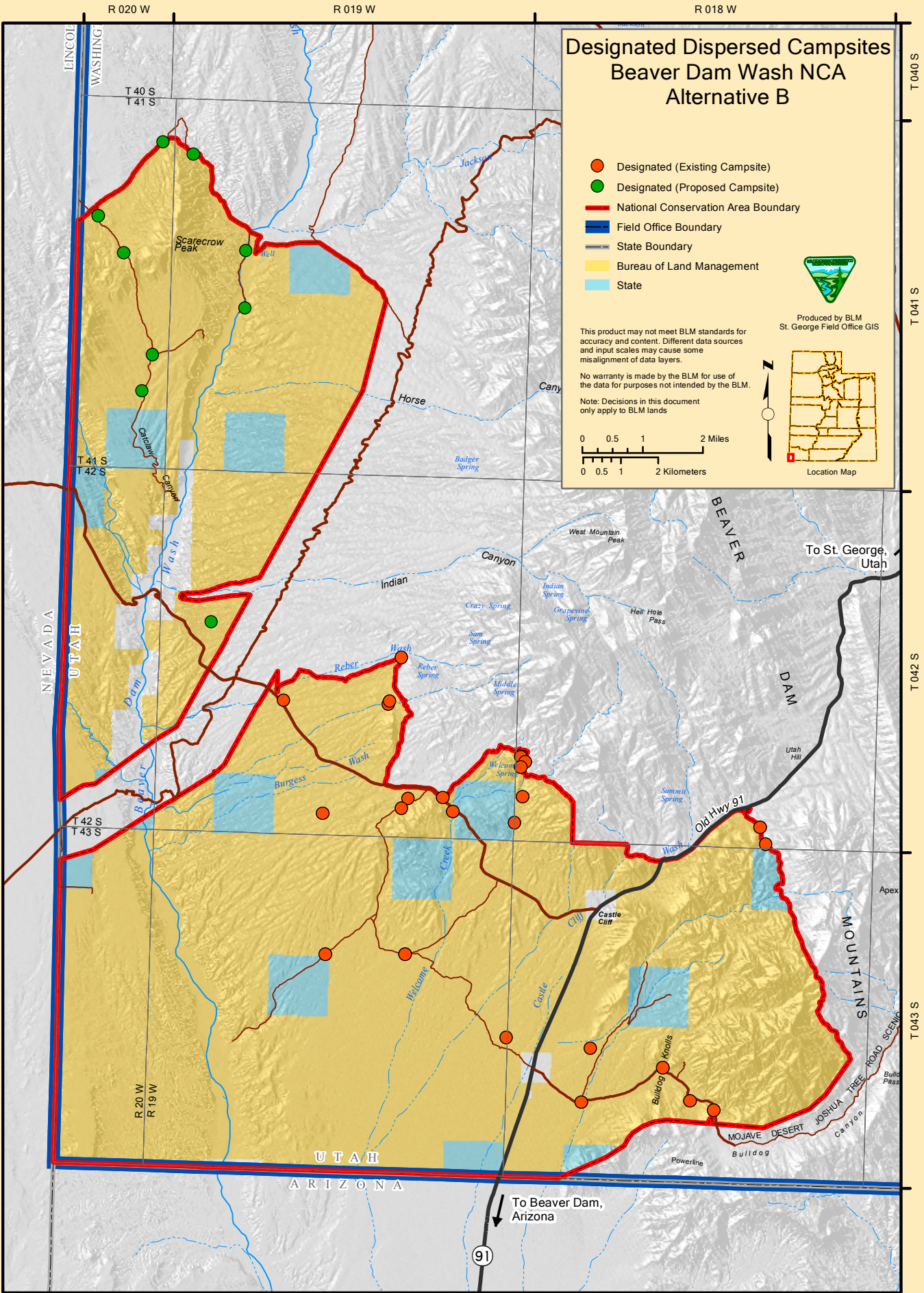


Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Limit SRPs for motorized recreation activities to roads and primitive roads authorized for use by the public.		
Discharge of Firearms:			
No similar action.	<p>Prohibit the discharge of firearms on 50,908 acres of designated critical habitat for the desert tortoise (pursuant to the Recovery Plan 1994, revised 2011), except in the act of licensed hunting according to state laws during prescribed seasons (Map 3-12).</p> <p>Discharge of firearms outside of critical habitat could be restricted if it is shown to cause resource degradation, create conflicts with other recreation uses, or jeopardizes public safety.</p> <p>Except in the act of licensed hunting, all firearms must be discharged toward a proper backstop sufficient to stop the projectile's forward progress.</p> <p>Targets must be constructed of wood, cardboard, paper or similar unbreakable materials. All targets, clays, and shells are considered litter after use and must be removed and disposed of properly.</p>	<p>Prohibit the discharge of firearms, except in the act of licensed hunting according to state laws during prescribed seasons.</p>	<p>Authorize the discharge of firearms in the NCA.</p> <p>Except in the act of licensed hunting, all firearms must be discharged toward a proper backstop sufficient to stop the projectile's forward progress.</p> <p>Targets must be constructed of wood, cardboard, paper or similar unbreakable materials. All targets, clays, and shells are considered litter after use and must be removed and disposed of properly.</p>
No similar action.	Prohibit paintball activities of any kind.		
Public Education and Interpretation			
No similar action.	<p>Develop an implementation-level Interpretive Master Plan that creates a long-range vision to guide interpretative services that emphasize the values and significance of the NCA and addresses a long-term strategy for name recognition and branding. The plan will include the following:</p> <p>a) Interpretative goals, objectives, and associated management actions necessary for interpreting themes to key user groups/audiences;</p> <p>b) Identification of a full range of interpretive services including facilities, programs, activities, exhibits, publications/printed materials, electronic media, and audiovisuals to enhance knowledge and appreciation of natural and cultural resources, and to promote stewardship;</p> <p>c) Identification of opportunities for outreach programs with user groups, local schools, universities, and special interest groups;</p> <p>d) Identification of opportunities to enrich interpretation through partnerships with municipal, county, state, and national parks, educational institutions, and other organizations;</p> <p>e) Identification of desired visitor experiences consistent with the RAMP and RMZs;</p> <p>f) Identification of themes and sub-themes to communicate the story of place (e.g., those narratives that express the unique and compelling character of the NCA);</p>		



Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	g) Consistency with NCA architectural design standards (e.g., color, shape, themes) that will apply to all site improvements, recreational facilities, site fixtures, structures, and associated spaces; h) Integration of graphic elements such as logos, logo placements, color schemes, quality, and voice across all media to ensure effective recognition and branding for the NCA; i) Training goals and objectives for staff and volunteers to ensure consistency in interpretive themes and professionalism.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies that evaluate the effects of diverse recreation activities on the desert environment.		
Implementation Decisions: Beaver Dam Wash SRMA			
The remaining Recreation Management decisions in Table 2-31 are not land-use plan decisions; they are implementation decisions. They address issues that were raised during the planning process and have been included to expose the reader to the general management direction being proposed for the NCA. These decisions provide the framework for the RAMP.			
Recreation Facilities:			
No similar action.	Develop uniform architectural design standards for all site improvements, recreational facilities, site fixtures, structures, and associated spaces developed in the NCA. These standards include construction materials, styles, colors, textures, and interpretive themes.		
No similar action.	Construct site improvements, recreational facilities, site fixtures, structures, and associated spaces in the Frontcountry Zones to protect resource values, respond to recreational use demand, and enhance visitor experiences. Developments could include standard and/or expanded amenity fee sites.		
No similar action.	Issue Recreation Use Permits (RUPs) through the collection of standard or expanded amenity fees for the short-term recreational use of specialized sites or facilities (such as campgrounds and day use sites) which meet fee collection guidelines as provided for in the Federal Lands Recreation Enhancement Act of 2004 or subsequent similar authority.		
Dispersed Camping:			
The Bureau shall restrict vehicle-based camping in the Desert Wildlife Management Area (DWMA) or ACEC to within 50 feet of designated routes. Before route designation, vehicle-based camping shall be limited to within 50 feet of existing routes. No camping shall be authorized for longer than 14 consecutive days in any one area within the DWMA and ACEC (SGFO RMP Appendix 4).	Limit dispersed camping in the Frontcountry and Backcountry Zones to designated undeveloped campsites located in previously disturbed areas and at appropriate distances from sensitive natural and cultural resources. Each designated campsite will include, but is not limited to:  (a) A visible marker that clearly delineates the location as a designated campsite; (b) A metal campfire container.  Designate 38 sites for dispersed camping in the Frontcountry and Backcountry Zones (Map 2-16).	Limit dispersed camping in the Frontcountry and Backcountry Zones to designated undeveloped campsites located in previously disturbed areas and at appropriate distances from sensitive natural and cultural resources. Each designated campsite will include, but is not limited to:  (a) A visible marker that clearly delineates the location as a designated campsite; (b) A metal campfire container.  Designate 30 sites for dispersed camping in the Frontcountry and Backcountry Zones (Map 2-17).	Limit dispersed camping in the Frontcountry and Backcountry Zones to designated undeveloped campsites located in previously disturbed areas and at appropriate distances from sensitive natural and cultural resources. Each designated campsite will include, but is not limited to:  (a) A visible marker that clearly delineates the location as a designated campsite; (b) A metal campfire container.  Designate 46 sites for dispersed camping in the Frontcountry and Backcountry Zones (Map 2-18).





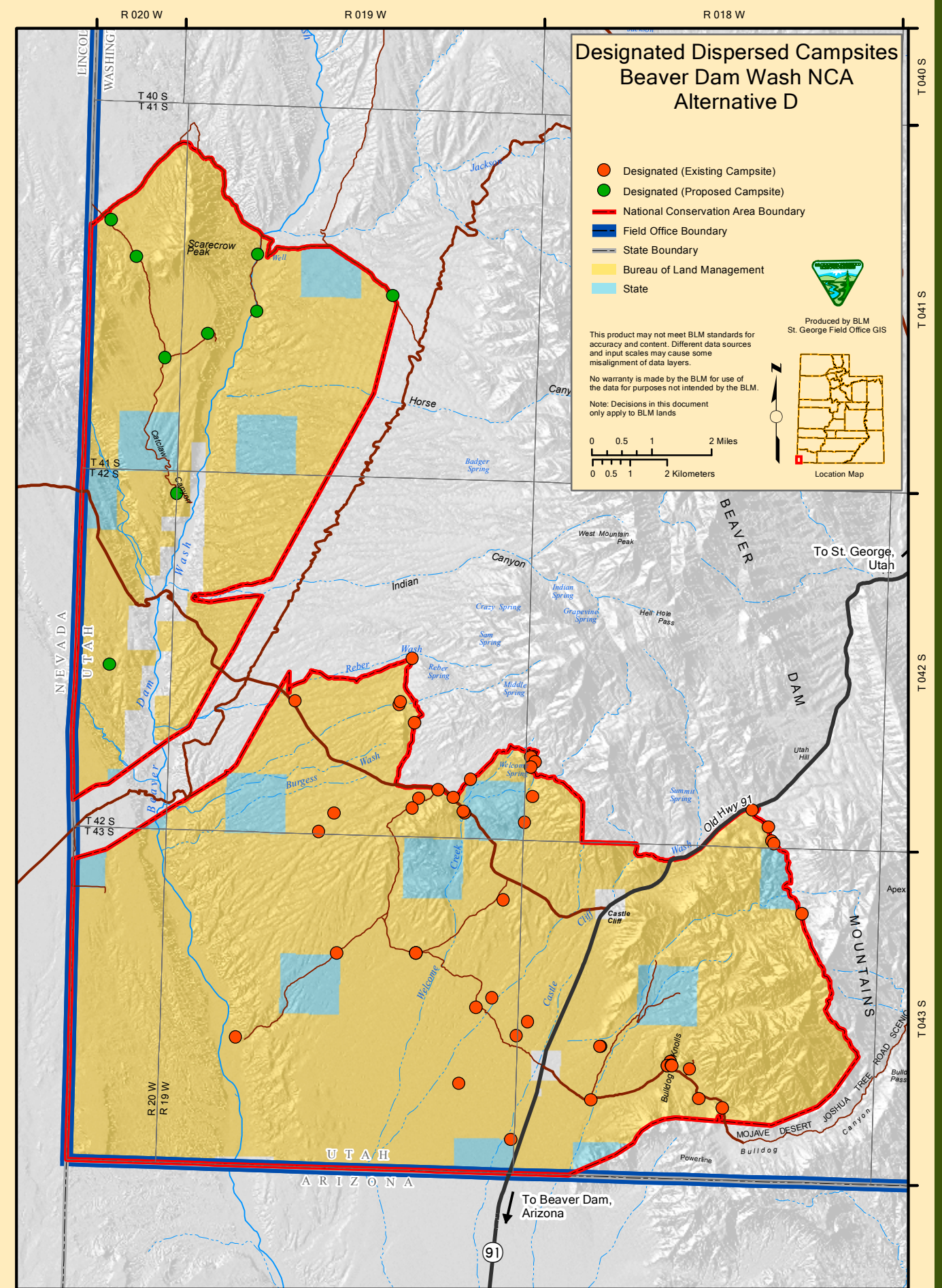
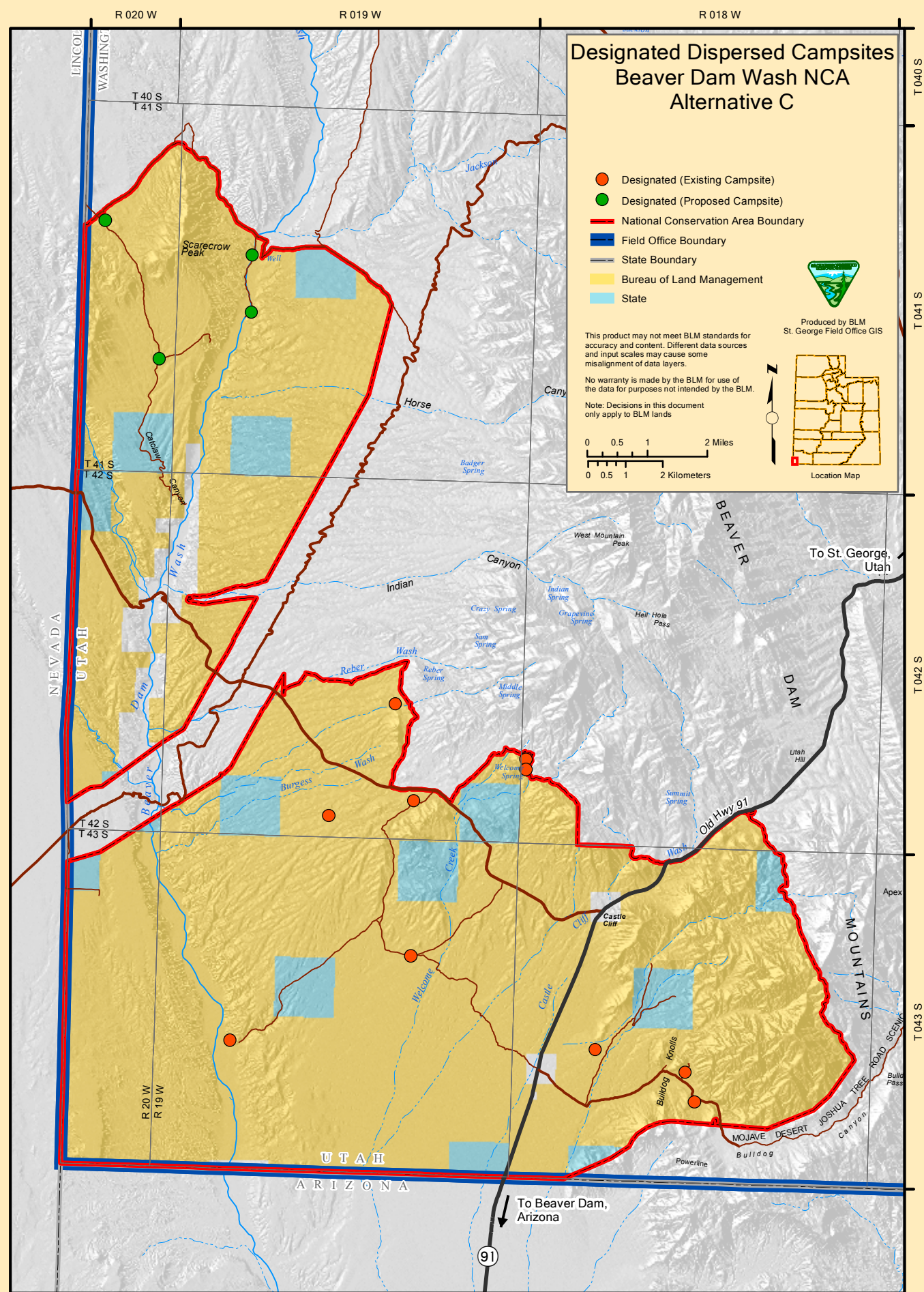




Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Designated undeveloped campsites may be added or removed as needed to minimize resource impacts or meet recreation needs. Allow dispersed camping in the Primitive Zone.		
No similar action.	Provide public education on minimum impact camping through a variety of on- and off-site media.		
No similar action.	Campfires are allowed, restricted, or prohibited in accordance with applicable fire management policies and restrictions.		
<i>Non-motorized Trails:</i>			
No similar action.	Design and construct the non-motorized trail system to the professional standards outlined in Appendix I to ensure that trail design: a) Addresses the needs of equestrians, hikers, climbers, and mountain bikers; b) Protects diverse NCA resource values from direct or indirect recreation impacts by promoting compliance with regulatory requirements and visitor use restrictions; c) Results in sustainable systems; d) Provides high quality experiences; e) Serves the abilities of non-motorized recreational users; f) Offers opportunities for looping, varying distances, linking between geographic areas and trailheads, and connecting to heritage and other educational resources. g) Minimizes user conflicts by separating user groups whenever feasible; h) Limits the desire to venture off-trail.		
No similar action.	New trails could be constructed in the Primitive Zone if monitoring shows negative impacts to natural and/or cultural resource values from off-trail uses. Trail construction would be accompanied by the requirement for visitors to stay on trails. Monitoring parameters, trail alignments, and potential off-trail restrictions would be developed as part of the RAMP.		
No similar action.	Authorize the development of new non-motorized trails in the Frontcountry or Backcountry Zones.		
<i>Commercial Special Recreation Permits (SRPs):</i>			
No similar action.	Limit SRPs for recreation activities to 10% of overall visitation (overall visitation is defined as the total number of all visits: commercial and non-commercial, motorized and non-motorized).	Same as Alternative B.	Limit SRPs for recreation activities to 20% of overall visitation.
No similar action.	Set group size limits for SRPs on a case-by-case basis. Factors for the determination of limits would include, but are not limited to: type of activity, type of transportation, length of stay, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.	All SRPs would be limited to a group size of 15, including guides.	Same as Alternative B.
<i>Competitive SRPs:</i>			
The following use prescriptions will be applied to	SRPs for competitive running and bicycling events could be	Do not authorize SRPs for competitive non-motorized	Same as Alternative B.

Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
management of public lands within the Beaver Dam Slope ACEC...Except where further restricted, noncommercial groups of over 75 persons camping in open areas will be required to obtain a letter of authorization from BLM that will establish requirements for public sanitation and garbage removal and other terms needed to protect the integrity of the habitat. Competitive events will not be authorized to prevent direct and indirect habitat degradation and tortoise mortality (USDOI/USFWS 1994).	authorized on roads in the NCA if they meet the following criteria: a) Event staging takes place outside the NCA or takes place on designated roads and/or at trailheads inside the NCA; b) The event causes no new surface disturbance; c) Event scheduling complies with seasonal restrictions to protect wildlife and habitats, (e.g., restrictions on events during desert tortoise active season, generally between March 15 and October 15).	events in the NCA.	
No similar action.	Group size limits for competitive non-motorized events would be set on a case-by-case basis. Factors for the determination of limits could include, but are not limited to: type of event, length of event, number of participants, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.	Do not authorize SRPs for competitive non-motorized events in the NCA.	Same as Alternative B.
<i>Organized Group SRPs:</i>			
The following use prescriptions will be applied to management of public lands within the Beaver Dam Slope ACEC...Except where further restricted, noncommercial groups of over 75 persons camping in open areas will be required to obtain a letter of authorization from BLM that will establish requirements for public sanitation and garbage removal and other terms needed to protect the integrity of the habitat. Competitive events will not be authorized to prevent direct and indirect habitat degradation and tortoise mortality (USDOI/USFWS 1994).	Authorize SRPs for organized groups (e.g., scouting events, church events, school classes, historical reenactments) on a case-by-case basis, if the proposed event conforms to an implementation-level Interpretive Master Plan, when developed (see Public Education and Interpretation below).  Group size for organized groups would be set on a case-by-case basis. Factors for the determination of limits could include, but are not limited to: type of activity, type of transportation, length of stay, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.		

Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Handcarts, buggies, wagons, or other animal-drawn vehicles would be limited to travel on roads and primitive roads designated through the approved TMP. All proposed activities (e.g., historical reenactments) would require an SRP or a letter of authorization from the NCA Manager.		
Rock Climbing:			
No similar action.	Develop a Climbing Management Plan as part of the RAMP. The plan would: a) Identify areas where climbing would be authorized; b) Identify potential climbing restrictions such as group size limits or seasonal closures; c) Establish monitoring protocols to identify resource impacts; d) Establish procedures for authorizing new climbing areas. All authorized climbing areas would remain open until the Climbing Management Plan is complete.		
No similar action. (Map 2-19)	Authorize six new climbing areas in the Woodbury Road area. Authorize two new climbing areas in the Utah Hills area. (Map 2-20)	No new climbing areas would be authorized until the Climbing Management Plan is complete (Map 2-19).	Same as Alternative B. (Map 2-20)
Other Recreational Uses:			
No similar action.	Only permit physical geocaches in the Frontcountry and Backcountry Zones.  Allow virtual geocaches in all RMZs provided they are compliant with other zone restrictions.  Approval from authorized NCA staff would be required prior to any physical geocache placement.  Approval from authorized NCA staff would be required prior to the public posting of any virtual geocache placement.	Only permit physical geocaches in the Frontcountry Zone.  Allow virtual geocaches in all RMZs provided they are compliant with other zone restrictions.  Approval from authorized NCA staff would be required prior to any physical geocache placement.  Approval from authorized NCA staff would be required prior to the public posting of any virtual geocache placement.	Permit physical geocaches in the Frontcountry, Backcountry, and Primitive Zones.  Allow virtual geocaches in all RMZs provided they are compliant with other zone restrictions.  Approval from authorized NCA staff would be required prior to any physical geocache placement.  Approval from authorized NCA staff would be required prior to the public posting of any virtual geocache placement.
No similar action.	Prohibit the take-off and landing of powered parachutes in the NCA.		
No similar action.	Prohibit the take-off and landing of remote-controlled aircraft in the NCA.		
No similar action.	Casual rock collection, including the gathering of mineral specimens and rock hounding, would be allowed under the following criteria: a) Collect using hand tools; b) Only collect specimens for personal use.	Prohibit casual rock collection in the NCA.	Same as Alternative B.
No similar action.	Prohibit all recreational metal detecting activities.	Same as Alternative B.	Only allow recreational metal detecting that results in minimal surface disturbance.

Table 2-31 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Recreational prospecting or mining, defined in 43 CFR 3809.5 and <i>BLM Handbook H-3809-1</i> as “casual use,” would be limited to the following activities:  a) Collection of geochemical, rock, soil, or mineral specimens using non-motorized hand tools;  b) Hand-panning;  c) Non-motorized sluicing.  Do not allow motorized, mechanized, electronic, or battery-operated prospecting or mining (e.g., portable suction dredges, gold spears, metal detectors, small dry washers).  Before engaging in “casual use” prospecting or mining activities, the following must occur:  a) A written request must be submitted to the NCA Manager at least 15 calendar days in advance;  b) Written notification from the NCA manager must be received verifying that requested activities are “casual use” and not prohibited in the NCA.	Prohibit “casual use” recreational prospecting or mining.	Same as Alternative B.
<i>Monitoring:</i>			
No similar action.	Develop a comprehensive program for monitoring recreational impacts in the NCA as part of the RAMP. The program would focus primarily on the identification of illegal trails and would include a progression of appropriate management actions.		



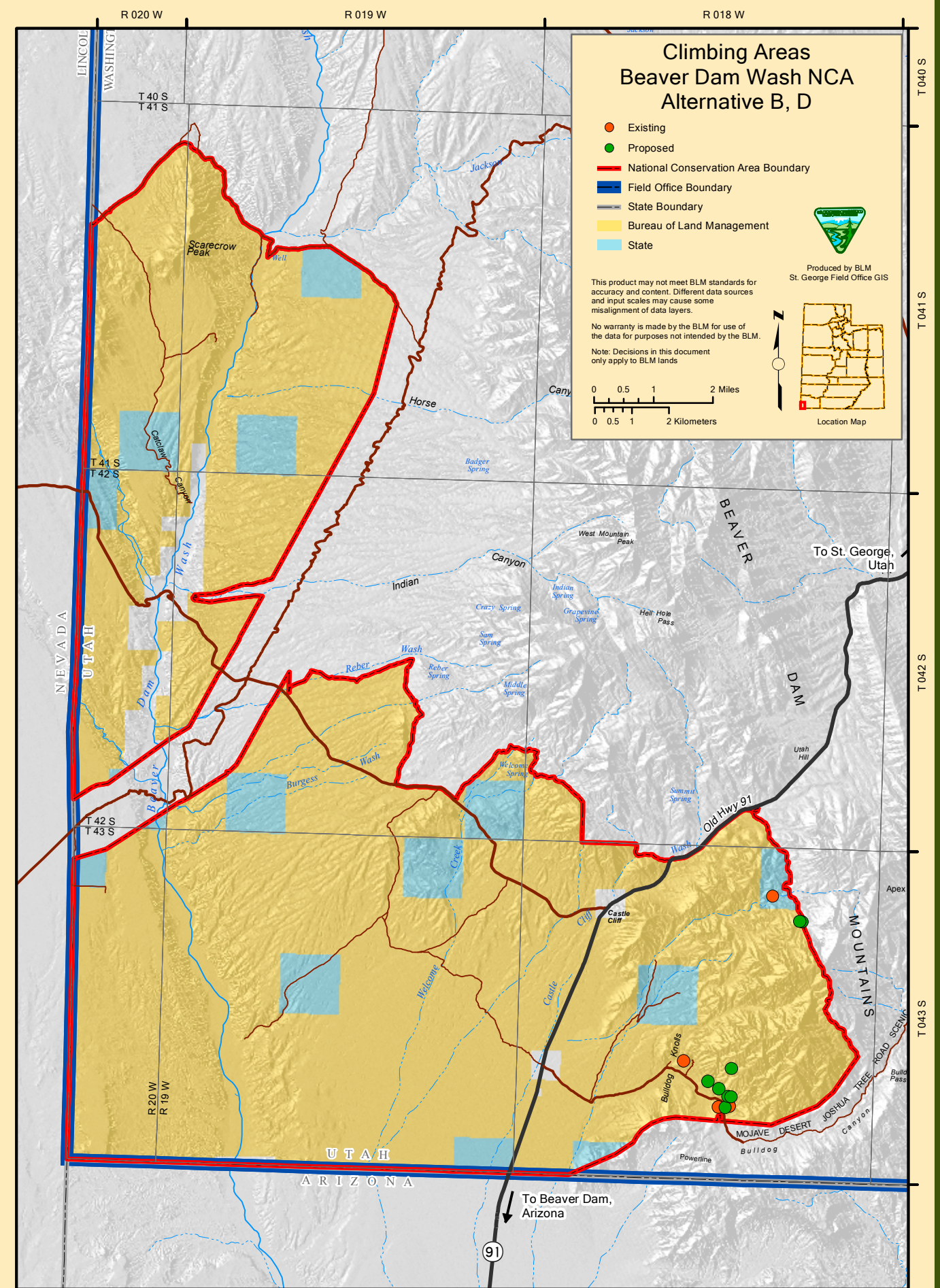
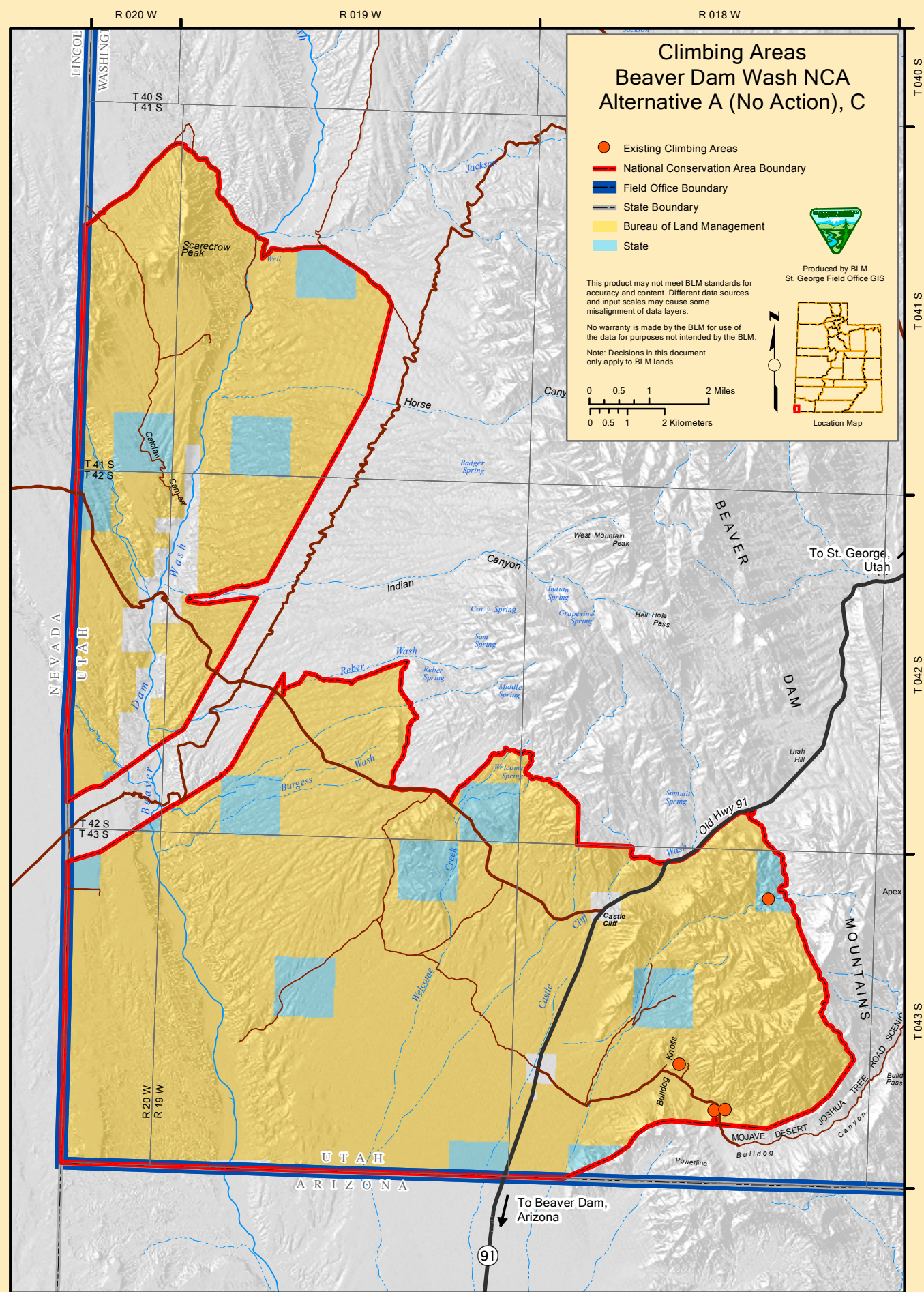


Table 2-32 Beaver Dam Wash NCA Recreation Management Zone Descriptions

Table 2-32 Beaver Dam Wash NCA Recreation Management Zone Descriptions
<b>FRONTCOUNTRY ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from Old Highway 91 and County roads.</li><li>• Accommodates a large number of visitors.</li><li>• Large number of management controls consisting primarily of directional, educational, and regulatory signs.</li><li>• BLM staff presence is consistent.</li><li>• Law enforcement patrols are irregular and often based on incident or emergency response.</li><li>• Significant amount of infrastructure; includes all roads, parking, and future trailheads.</li><li>• Motorized use is restricted to designated roads and trails.</li><li>• Mechanized use is restricted to designated roads and trails.</li><li>• Majority of zone is within critical tortoise habitat.</li><li>• Outside of Congressionally designated road areas.</li><li>• Varies in size by alternative.</li></ul>
<b>BACKCOUNTRY ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from the Rural Zone trailheads or Frontcountry Zone trails.</li><li>• Less recreational use than the Frontcountry Zone, but still accommodates a significant number of visitors.</li><li>• Fewer management controls consisting primarily of directional and regulatory signs.</li><li>• BLM staff presence is infrequent and generally based on project-specific need.</li><li>• Law enforcement patrols generally limited to incident and emergency response.</li><li>• Motorized use is restricted to administrative purposes and emergency response.</li><li>• Mechanized use is restricted to designated trails.</li><li>• Portions of zone are within critical desert tortoise habitat.</li><li>• Corresponds with Congressionally designated road areas in all Alternative.</li><li>• Varies in size by alternative.</li></ul>
<b>PRIMITIVE ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from the Frontcountry or Backcountry Zones.</li><li>• Accommodates the fewest number of visitors.</li><li>• Limited management controls consisting primarily of directional and regulatory signs.</li><li>• BLM staff presence is very low.</li><li>• Law enforcement presence limited to emergency response.</li><li>• Motorized use prohibited except for emergency response.</li><li>• Cross-country travel is allowed. All visitors must be on foot or horseback.</li><li>• No constructed or maintained trails.</li><li>• Portions of zone are within critical tortoise habitat.</li><li>• Corresponds with Congressionally designated road areas in all Alternative.</li><li>• Varies in size by alternative.</li></ul>

Table 2-33 Comprehensive Travel and Transportation Management

Table 2-33 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Compatible traditional, current, and future use of the land is sustained by establishing a transportation system that contributes to protection of sensitive resources, promotes dispersed recreation, and minimizes user conflicts.  A high quality, sustainable transportation system that provides appropriate public and administrative access is developed and maintained to conserve, protect, and enhance the resource values of the NCA.		
<b>Objectives</b>			
It is BLM’s objective to continue to work closely with Washington County officials to ensure that use and enjoyment of existing roads and trails is permitted under safe and prudent conditions and that responsibility for maintenance is properly defined in road maintenance agreements or other appropriate documents. It is also BLM’s objective to work with municipalities, Washington County, the Utah Department of Transportation, and other affected parties in defining and planning for future transportation needs, locating environmentally compatible route Alternative, and resolving land use conflicts related to transportation systems where public lands are involved.	Provide a well-maintained and functional motorized transportation system that provides public access to recreational opportunities and is consistent with goals, objectives, and recommendations of the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).  Provide a functional motorized administrative transportation system that is consistent with goals, objectives, and recommendations of the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011) and provides the minimum access necessary to authorized infrastructure and valid ROWs.  Provide a nationally recognized, professionally designed, non-motorized trail system that provides access to a wide range of recreational opportunities and is consistent with the goals, objectives, and recommendations of the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).		
<b>Management Guidance Common To All Alternatives</b>			
BLM would coordinate transportation management with adjacent federal agencies, state and local governments, and authorized users.  The three areas identified by Congress on Beaver Dam Wash National Conservation Area Map as “Designated Road Areas” will be managed in accordance with mandates from OPLMA. Within these areas, roads identified on that map as open to the public will remain open. Except in cases where motorized vehicles are needed for administrative purposes, or to respond to an emergency, all other roads in the Designated Road Areas are closed to motorized vehicle travel by the public. Roads required for motorized vehicle access to valid existing rights will be open to authorized users only.  Outside of the three “Designated Road Areas”, except in cases where motorized vehicles are needed for administrative purposes, or to respond to an emergency, the use of motorized vehicles in the National Conservation Area shall be permitted only on roads designated through the TMP.			
<b>Management Actions</b>			
(For Non-motorized Transportation Management Actions, see Table 2-31 Recreation and Visitor Services.)			
<b>OHV Area Designations:</b>			
Approximately 63,480 acres will be Limited to Designated Roads and Trails. A map of the existing transportation system can be found at <a href="http://www.blm.gov/nxld">www.blm.gov/nxld</a> .			



Table 2-33 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Open to Cross Country OHV use: 0 acres Limited to Designated Roads and Trails: 63,480 acres Closed to OHV use: 0 acres (SGFO RMP Map 2.13) (Map 2-21)			
Other Motorized Transportation:			
No similar action.	All routes located outside of the Designated Road Areas will be evaluated and designated through the TMP with impacts analyzed in an Environmental Assessment (EA)		
No similar action.	Roads that were closed by Congress in the Designated Road Areas (29 miles), identified through OPLMA, and that are not required for administrative access or for use as non-motorized trails, fuel breaks, or other management purposes would be reclaimed and restored.		
No similar action.	Use of non-motorized, wheeled game carriers to retrieve game kills or collect antlers would be allowed in all areas except designated wilderness. Motorized game retrieval or antler collection would be prohibited.		
Non-Motorized Trails:			
No similar action.	Design and construct the non-motorized trail system to professional standards as described in Appendix I, to ensure that trail design:  a) Addresses the needs of equestrians, hikers, climbers, and mountain bikers; b) Protects diverse NCA resource values from direct or indirect recreation impacts by promoting compliance with regulatory requirements and visitor use restrictions; c) Results in sustainable systems; d) Provides high quality experiences; e) Serves the abilities of non-motorized recreational users; f) Offers opportunities for looping, varying distances, linking between geographic areas and trailheads, and connecting to heritage and other educational resources. g) Minimizes user conflicts by separating user groups whenever feasible; h) Limits the desire to venture off-trail.		
No similar action.	New trails could be constructed in the Primitive Zone if monitoring shows negative impacts to natural and/or cultural resource values from off-trail uses. Trail construction would be accompanied by the requirement for visitors to stay on trails. Monitoring parameters, trail alignments, and potential off-trail restrictions would be developed as part of the RAMP.		
No similar action.	Where new trail development would result in a modification of the primary constituent elements of designated critical habitats, restore an equivalent acreage of damaged habitat in the NCA through reclamation and re-vegetation (with approved species) of user-created trails, closed roads, fire-damaged lands, or other disturbed areas.		
No similar action.	Authorize the development of new non-motorized trails in the Frontcountry or Backcountry Zones.		

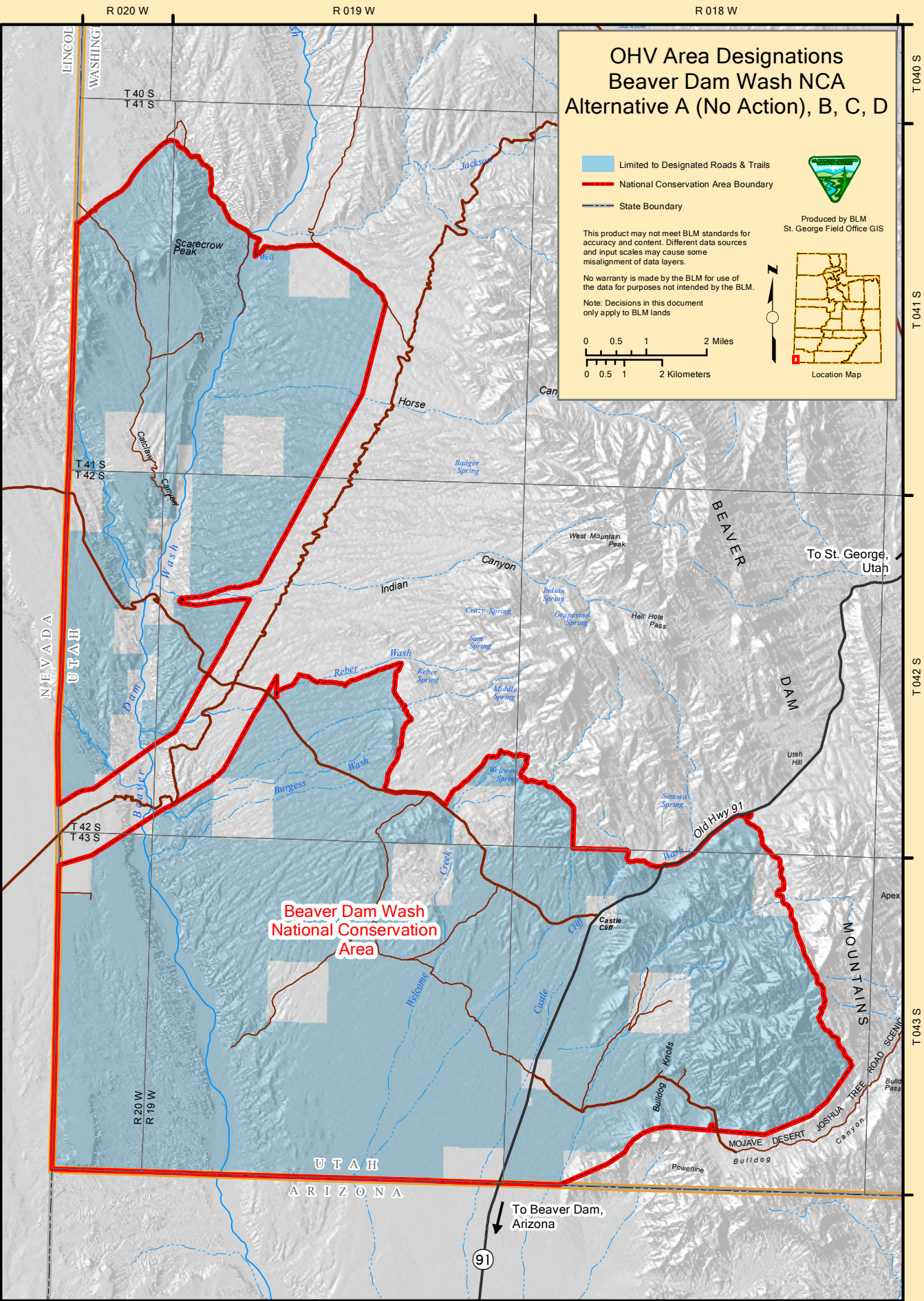




Table 2-33 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Design and construct the non-motorized trail system to professional standards to ensure that trail design: a) Addresses the needs of equestrians, hikers, climbers, and mountain bikers; b) Protects diverse NCA resource values from direct or indirect recreation impacts by promoting compliance with regulatory requirements and visitor use restrictions; c) Results in sustainable systems; d) Provides high quality experiences; e) Serves the abilities of non-motorized recreational users; f) Offers opportunities for looping, varying distances, linking between geographic areas and trailheads, and connecting to heritage and other educational resources. g) Minimizes user conflicts by separating user groups whenever feasible; h) Limits the desire to venture off-trail.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public lands etiquette, including OHV etiquette.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that encourage motorized users to use existing disturbed areas for parking and camping.		

Table 2-34 Lands and Realty

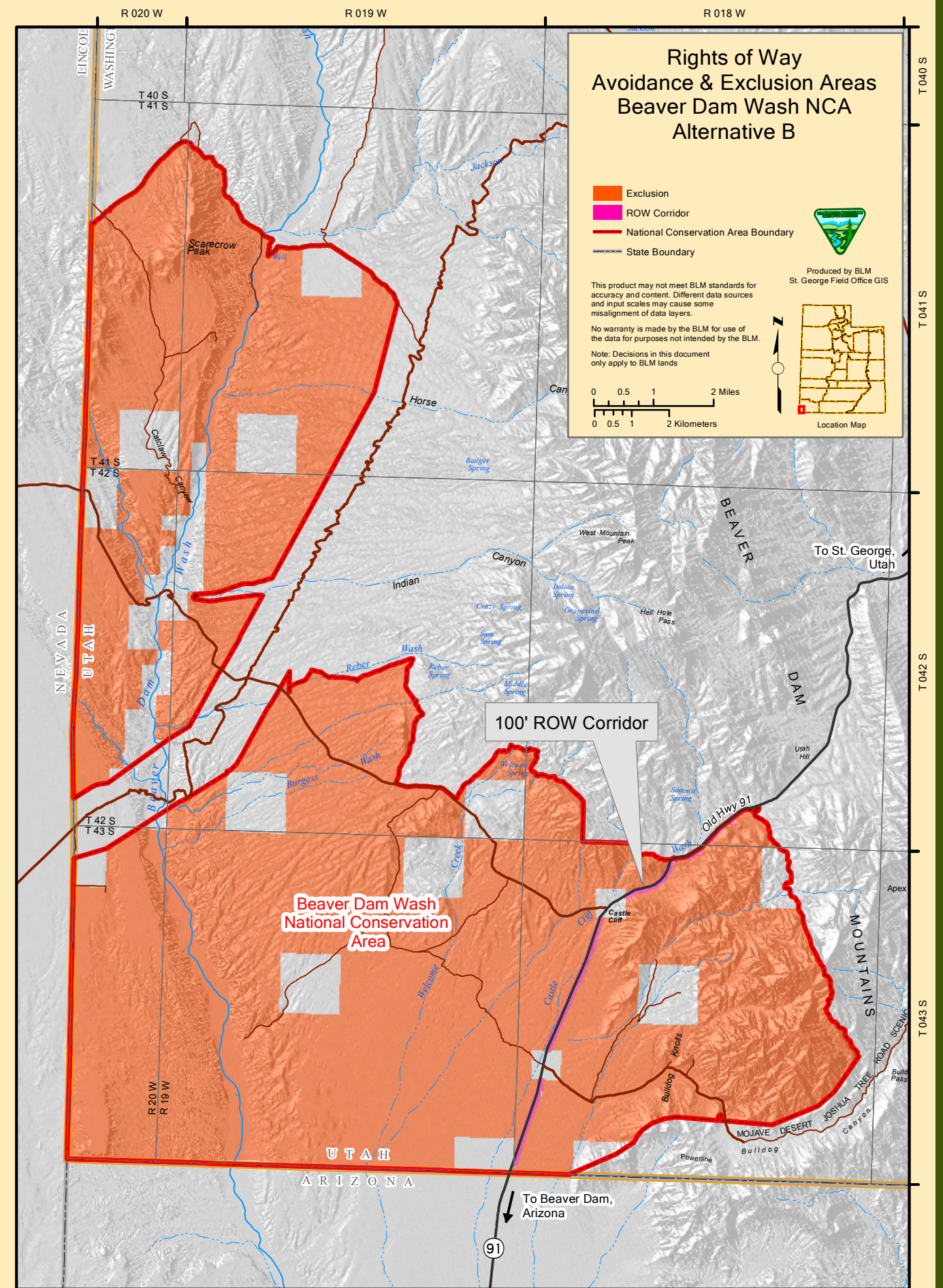
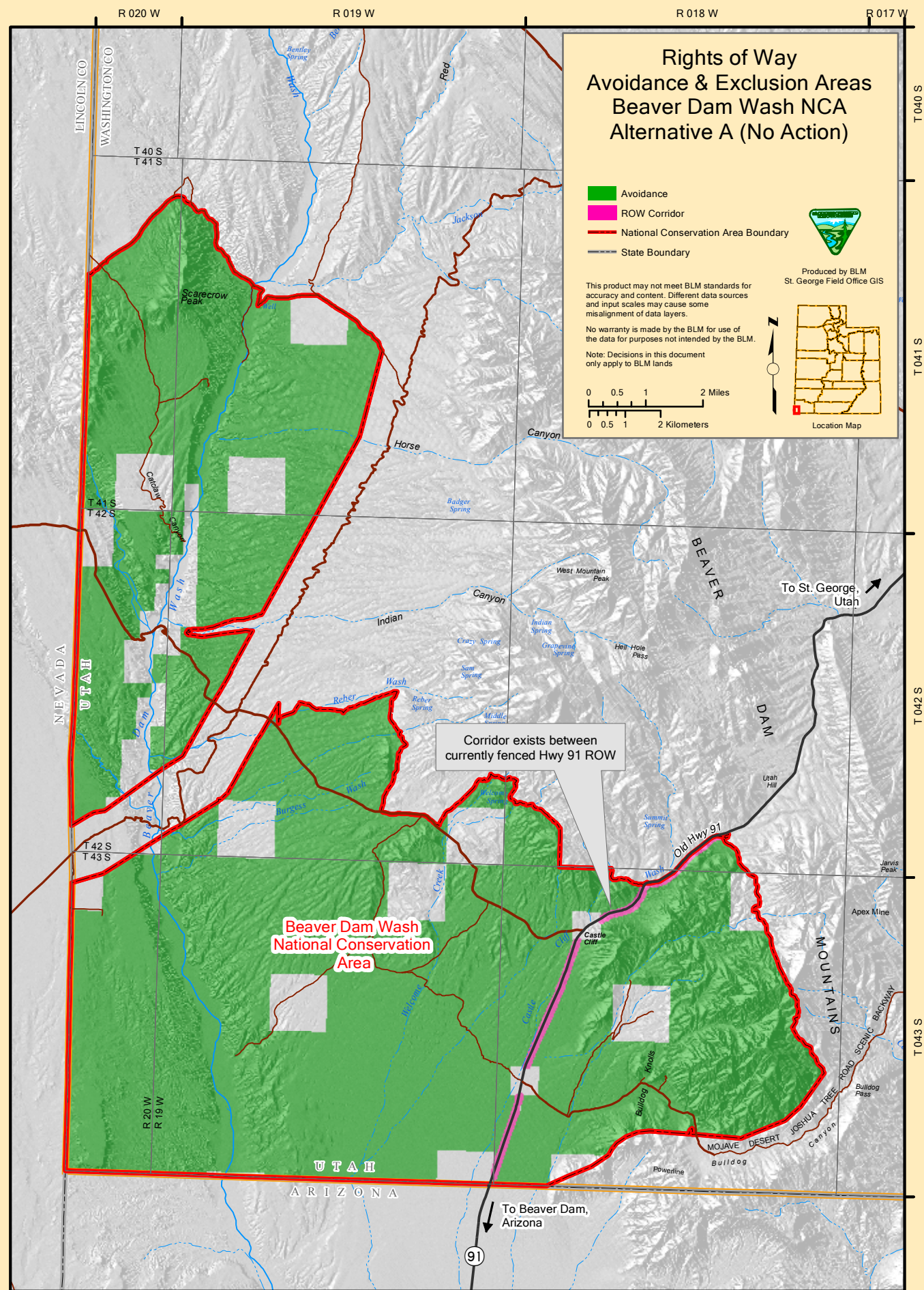
Table 2-34 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Land tenure adjustments are made to assist the conservation, protection, and enhancement of NCA resource values, facilitate management, and reduce administrative costs.  Land use authorizations further the purposes of conservation, protection, and enhancement of resource values in the NCA.		
Objectives			
In accordance with national policy, BLM will retain lands within its administration except where necessary to accomplish important objectives outlined in resource sections throughout this Plan. BLM will transfer lands out of federal ownership or acquire non-federal lands where needed to accomplish important resource management goals or to meet essential community needs.	Non-federal lands are acquired from willing land owners through purchase, exchange or donation.  Surface and subsurface rights would be acquired whenever possible to avoid creating split estates.  Conservation easements may be acquired where such interest would further the management objectives of the NCA.  Land tenure adjustments would be prioritized based on manageability, the feasibility of successful acquisition, and the ecological, cultural, recreational, and scenic values of the tract to be acquired.  Ensure that long and short term land use authorizations are consistent with the NCA purposes of resource conservation, protection, and enhancement.		
Management Guidance Common to All Alternatives			
<p>“(1) In General.—Subject to valid existing rights, all Federal land located in the National Conservation Area is withdrawn from—(A) all forms of entry, appropriation, and disposal under the public land laws; (B) location, entry, and patenting under the mining laws; (C) operation of the mineral leasing, mineral materials, and geothermal leasing laws. (2) Additional Land.—If the Secretary acquires additional land that is located in the National Conservation Area after the date of enactment of this Act, the land is withdrawn from operation of the laws referred to in paragraph (1) on the date of acquisition of the land” (OPLMA Section 1975 (g)).</p> <p>Public lands within a National Trail Management Corridor will be retained in federal ownership, in accordance with Section 203 of FLPMA, as classified in accordance with 43 CFR 2420.</p> <p>“Any land or interest in land that is located in the National Conservation Area that is acquired by the United States shall— (1) become part of the National Conservation Area; and (2) be managed in accordance with—(A) the Federal Land Policy and Management Act of 1976 (USC 1701 et seq.); (B) this section; and (C) any other applicable law (including regulations)” (OPLMA Section 1975 (f)).</p> <p>Manage public lands in accordance with applicable city and county zoning restrictions and municipal ordinances (to the extent that such restrictions and ordinances are consistent with the purposes for which the NCA was Congressionally-designated), as well as other federal laws, regulations, and policies, and with goals, objectives, and management decisions from the approved RMP for the NCA.</p> <p>Do not authorize commercial renewable energy (e.g., wind, solar) leases or ROWs in the NCA.</p> <p>Existing ROWs will be maintained in accordance with the respective ROW grant or other applicable authorization.</p>			



Table 2-34 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Management Actions			
Land Tenure Adjustments:			
BLM will acquire selected non-federal lands, with owner consent, for such purposes as ensuring public access to key use areas, consolidating public ownership of lands critical to recovery of species listed under the Endangered Species Act, providing essential public recreation opportunities, protecting important resources such as floodplains, riparian areas, wildlife habitat, cultural sites, and wilderness, and meeting the mutually agreed upon objectives of local, state, and federal plans or programs. Although most acquisitions will occur through exchange, they may also be made through purchase, donation, or conservation easement.	Work with willing land owners or administrators to acquire in-holdings and edge-holdings that are in the public interest through purchase, exchange of public lands targeted for disposal outside of the NCA boundaries, donation, or conservation easement.  Acquire both surface and subsurface rights whenever possible to avoid the creation of split estates. Prioritize acquisition of non-federal inholdings and parcels that adjoin the NCA boundaries that meet one or more of the following criteria:  a) Further the purposes of the NCA relating to the conservation, protection, and enhancement of its ecological, scenic, wildlife, cultural, historical, natural, educational, and scientific resources;  b) Enhance public recreation experiences and benefits;  c) Provide additional access to other public lands.		
Linear ROWs:			
Avoidance area: 63,284 acres Exclusion area: 0 acres (SGFO RMP Map 2.3) Designated ROW Corridor: 196 acres (SGFO RMP Map 2.2) (Map 2-22)	Designate ROW Avoidance and Exclusion areas as follows (Map 2-23):  Avoidance area: 0 acres Exclusion area: 63,420 acres Designated ROW Corridor: 60 acres  New ROWs will be granted in Exclusion areas only when required by law or federal court action.	Designate ROW Avoidance and Exclusion areas as follows (Map 2-24):  Avoidance area: 0 acres Exclusion area: 63,480 acres Designated ROW Corridor: 0 acres  New ROWs will be granted in Exclusion areas only when required by law or federal court action.	Designate ROW Avoidance and Exclusion areas as follows (Map 2-25):  Avoidance area: 0 acres Exclusion area: 63,352 acres Designated ROW Corridor: 128 acres  New ROWs will be granted in Exclusion areas only when required by law or federal court action.

Table 2-34 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Designated Utility Corridor: Following the route of Old Highway 91 across the Beaver Dam slope from the Arizona border to the Shivwits Indian Reservation, then from the northern boundary of the Shivwits Indian Reservation to Gunlock Reservoir following the Gunlock road. This corridor would be the width of the currently fenced road ROWs.  (SGFO RMP Table 2-2)	Continue to manage a designated utility and transportation corridor through the NCA that follows the route of Old Highway 91 from the Arizona state line to the Shivwits Indian Reservation. Establish the width of that designated corridor to be 100 feet in total width, 50 feet from either side of the centerline of the current highway. Limit new utility ROWs to subsurface installations within that 100 foot wide designated corridor, to protect the scenic qualities of the NCA and the OST Management Corridor from visual intrusions.	Subject to valid existing rights, revoke the designated utility and transportation corridor through the NCA that follows the route of Old Highway 91 from the Arizona state line to the Shivwits Indian Reservation and is defined as the width of the currently fenced road ROW, to protect NCA values from impacts associated with the development of utilities and roads in this corridor.	Continue to manage a designated utility and transportation corridor through the NCA that follows the route of Old Highway 91 from the Arizona state line to the Shivwits Indian Reservation. Establish the width of that designated corridor to be 200 feet in total width, 100 feet from either side of the centerline of the current highway. Limit new utility ROWs to subsurface installations within that 200 foot wide designated corridor, to protect the scenic qualities of the NCA and the OST Management Corridor from visual intrusions.
<i>Site-type Leases and ROWs:</i>			
Scrub Peak will be added to the four existing communication sites at West Mountain, Little Creek Mountain, South Rockville, and Black Ridge north of Toquerville as shown on Map 2.2. To the extent practical, new users will be required to share site facilities to reduce impacts and lessen the need for additional sites.	Designate the NCA as an Avoidance area for site-type leases and ROWs.  New site-type leases and ROWS could only be authorized if the following criteria are met:  a) Locations outside the NCA are not feasible to serve the purpose of the lease or ROW;  b) Co-location within an existing site facility is not feasible to serve the purpose of the lease or ROW;  c) Proposal would be in conformance with area VRM Class;  d) Proposal would not result in adverse impacts to NCA resource values.	Designate the NCA as an Exclusion area for site-type ROWs.  New ROWs will be granted in Exclusion areas only when required by law or federal court action.	Same as Alternative B.
<i>Other Land Use Authorizations:</i>			
No similar action.	Do not authorize leases under the authority of the Recreation and Public Purposes Act within the NCA.  Only authorize commercial film permits if they further public understanding and appreciation of the NCA and its purposes. Permits may be subject to surface use and seasonal restrictions and will only be granted after applicable environmental compliance legal requirements have been satisfied, including site-specific NEPA analyses.		







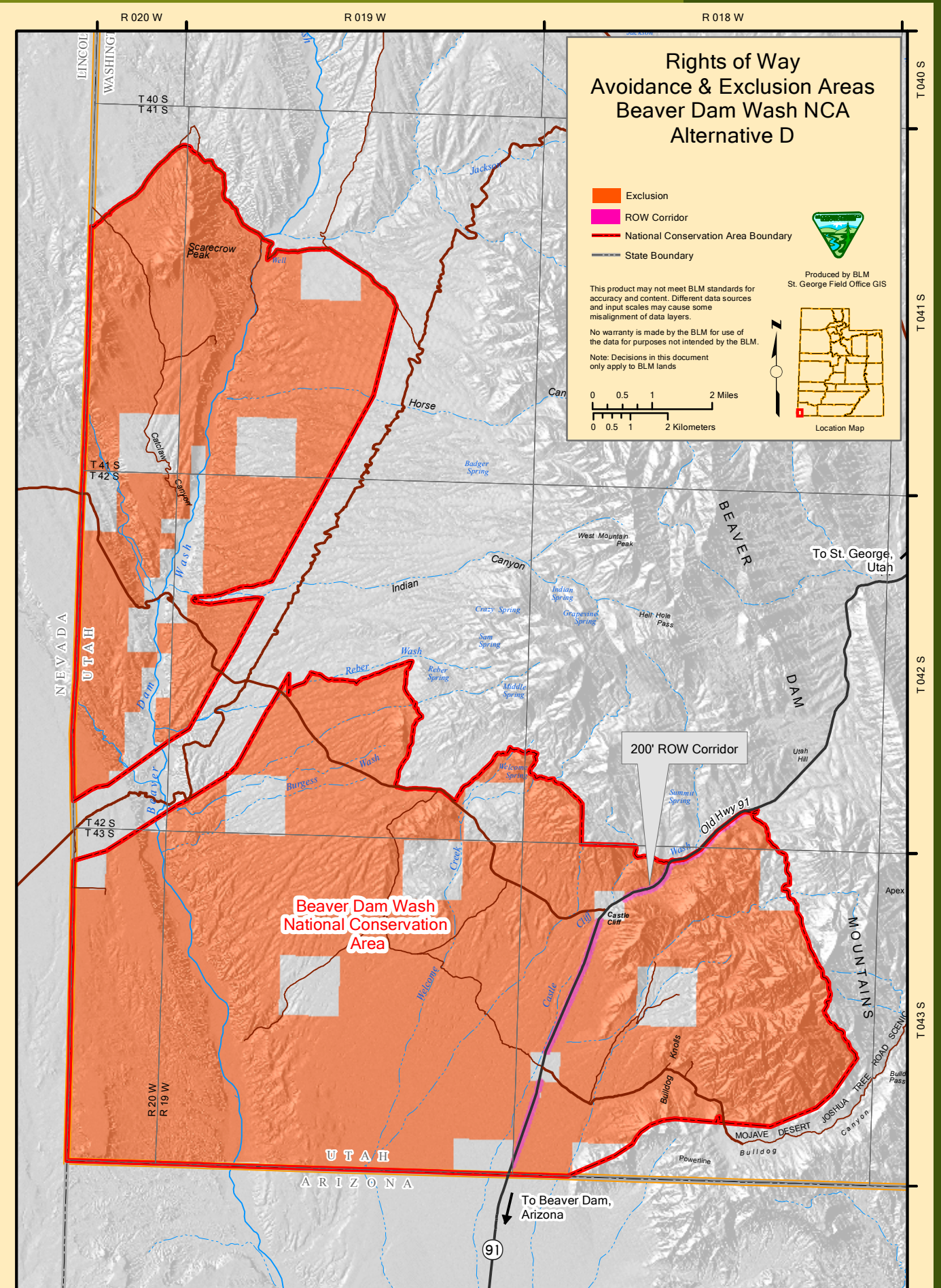
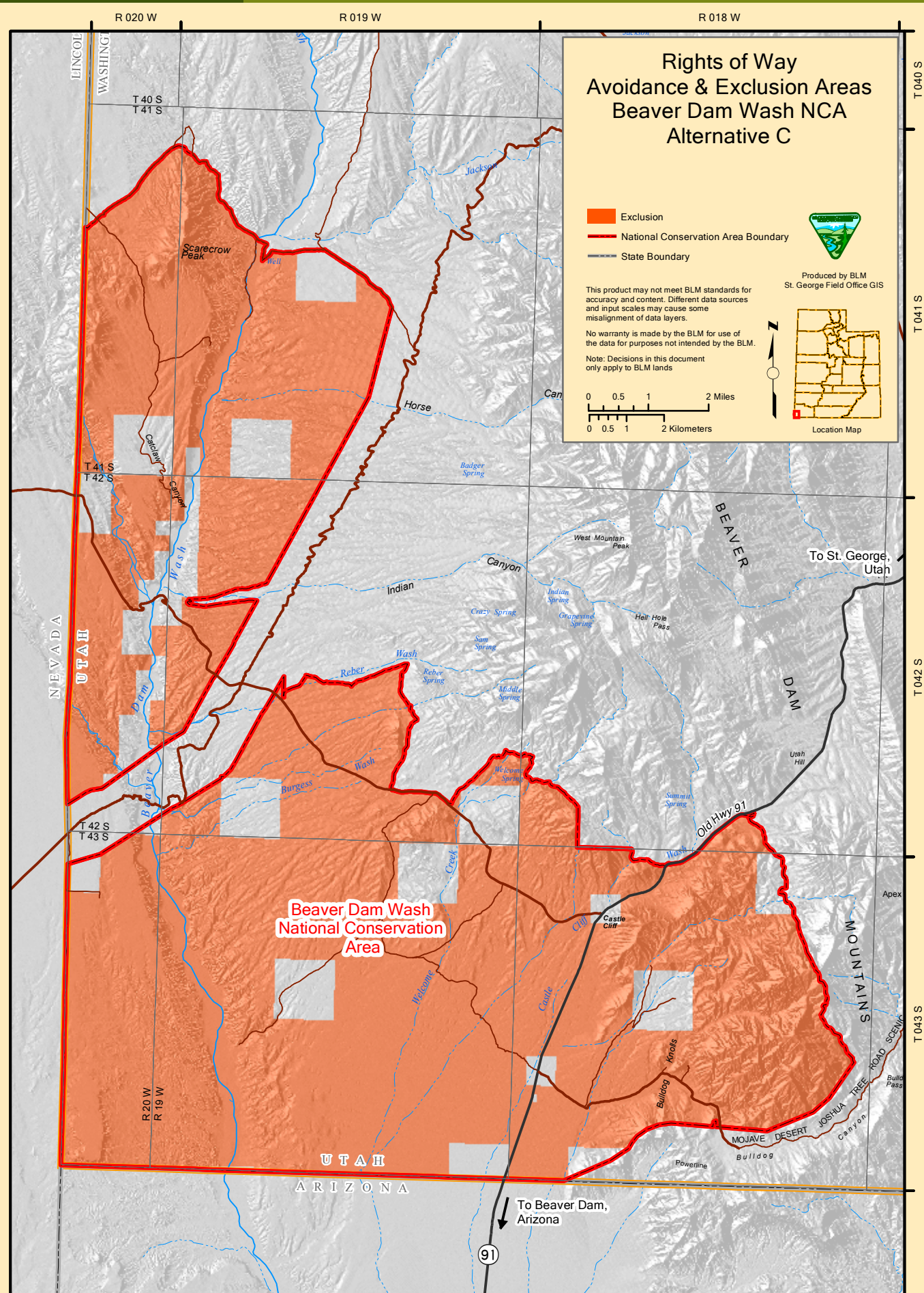




Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Air Quality</b>			
For all Alternative considered by this analysis, the magnitude of the changes in emissions would be insufficient to have the potential to cause significant impacts to air quality within or adjacent to the planning area.  Particulate matter (PM10, PM2.5) in the form of fugitive dust is the pollutant of most concern for the planning area, followed by precursors of ozone formation (NO2, VOC). Coarse fugitive dust (PM10), such as would be released through surface disturbances related to livestock grazing or motorized vehicle travel on unpaved roads, is considered to be a localized pollutant, rather than a regional scale pollutant, and can create elevated short-term impacts and nuisance level conditions. Under all Alternative, BLM would implement BMPs, dust abatement measures, or other management actions to reduce particulate emissions resulting from management actions.			
<b>Water Resources</b>			
This alternative does not identify specific management actions related to water resources of the NCA.  This alternative would continue to protect water resources and ensure compliance with state and federal water laws pertaining to water quality and pollution prevention.	This alternative would have management actions that overall would provide greater protections to surface water resources than those under Alternative A, but not as many as Alternative C.	This alternative would provide the most protection for surface water resources, by having the most restrictions (in both extent and area) on authorized land uses or activities that could potentially impair surface water quality.	This alternative would have management actions that overall would provide greater protections to surface water resources than those under Alternative A, but not as many as Alternative B or C.
<b>Geological and Paleontological Resources</b>			
This alternative identifies no specific Use Allocations or management actions related to geological or paleontological resources in the NCA. Significant paleontological resources would continue to be managed as required by law (e.g., PARPA).	Significant paleontological resources and outstanding geological resources would be identified, evaluated, and managed under appropriate Use Allocation through management plans developed to conserve and protect these values.  Significant resources would be allocated to Conservation for Future Use, Scientific Use, and Public Use. Research could be authorized that includes specimen collection and interpretation provided on or off-site for appropriate Public Use Sites.		
No similar action.	This alternative would allow interpretation for resources that are managed for Public Use to be developed on-site.	This alternative would allow interpretation for resources that are managed for Public Use to be developed off-site.	Impacts same as Alternative B.
<b>Cave and Karst Resources</b>			
This alternative identifies no Use Allocations or specific management actions related to Cave and Karst Resources in the NCA. These resources would continue to be managed as required by law and BLM policies.	Significant resources would be allocated to Conservation for Future Use, Scientific Use, and Public Use.  Cave and karst resources would be identified, evaluated, and managed under appropriate Use Allocation through management plans developed to conserve and protect these values.		
No similar action.	This alternative would allow interpretation for significant cave and karst resources that are managed for Public Use to be developed on-site.	This alternative would allow interpretation for significant cave and karst resources that are managed for Public Use to be developed off-site.	Impacts same as Alternative B.

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Soil Resources</b>			
This alternative identifies no specific management actions relating to the location of new developments (i.e. recreation facilities), and would not protect soils to the same degree as the three action Alternative. These resources would continue to be managed as required by law and BLM policies.	This alternative would have management actions that overall would provide greater protections to soil resources greater than those under Alternative A, but not as many as Alternative C.	This alternative would provide the most protection for soil resources, by having the most restrictions (in both extent and area) to activities that could damage or destroy soil crusts and vegetation cover, and cause excess erosion and compaction.	This alternative would have management actions that overall would provide greater protections to soil resources than those under Alternative A, but not as many as Alternative C.
<b>Native Vegetation Communities</b>			
Alternative A provides for the protection and management of native vegetation communities, through fire suppression, a wide array of hazardous fuel reduction treatments, and noxious weed and invasive species management. It allows for prescriptive fire and mechanical treatments and vegetation conversions to benefit livestock and wildlife. Vegetation restoration projects could be authorized using non-native species, if certain criteria are met.	Alternative B provides for the conservation, protection, and restoration of native vegetation communities, through fire suppression, a narrower suite of hazardous fuel treatment methods and noxious weed and invasive species management options. It would not authorize vegetation conversions, would focus on substantially non-invasive methods for fuel reduction and vegetation restoration, and emphasize the use of native species, unless a higher number of specific criteria, when compared to Alternative A, can be met.	Alternative C emphasizes the least invasive methods possible to achieve the conservation, protection, and restoration of native vegetation communities. It would not authorize vegetation conversions, would require only non-invasive methods for fuel reduction and vegetation restoration and require the use of native species. Overall, Alternative C provides the greatest protection of vegetation and biophysical settings.	Alternative D provides greater flexibility than Alternative B and C, but less than Alternative A, in the methods that can be used to conserve, protect, and restore native vegetation communities. It would allow for invasive methods for fuels treatments and vegetation restoration projects and for the use of non-native species, with fewer constraints.
No similar action.	Under all Alternative, opportunities for scientific research, climate change monitoring, public education and interpretation could result in greater understanding of resources and improvements in management techniques to protect or enhance vegetation resources, biophysical settings, and the ecosystems within the NCA.		
<b>Fire and Fuels</b>			
Vegetation treatments, restoration/rehabilitation projects, and fuels management efforts would serve to enhance native vegetation communities and reduce the presence and proliferation of non-native, invasive species. This would decrease fire frequency and intensity by promoting healthy, diverse vegetation communities that fuel low-intensity fires, slow the spread of fire, and allow fires to be more easily controlled. Fire	The impacts would be similar to those identified under Alternative A, except increased vegetation treatments designed to enhance vegetation health and wildlife habitat, increased restrictions on surface disturbing activities (including ROW developments), and substantial limitations on OHV use would decrease the probability of wildland fire occurrence and the potential for high-intensity wildland fires.	The impacts would be similar to those identified under Alternative B, except the overall extent and intensity of the impacts would decrease slightly due to increased restrictions on resource uses and emphasis on the least invasive methods to accomplish resource objectives.	The impacts would be similar to those identified under Alternative B, except the overall extent and intensity of the impacts would decrease restrictions on resource uses.



Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
suppression efforts would contribute to these effects by protecting unburned native vegetation communities.  Recreation activities and ROW developments could increase fire frequency by introducing additional ignition sources and increasing the probability of unintentional ignitions.			
Vehicle-based dispersed camping could continue within 50 feet of existing routes, outside the three Designated Road Areas. Potential fire ignitions could occur from vehicle travel off routes to campsites.	Outside of the three “Designated Road Areas”, all vehicle-based dispersed camping would be limited to designated sites in disturbed areas or to a developed campground, decreasing the potential for fire ignitions related to off-road travel.		
Noxious Weeds and Invasive Species Management			
Specific weed treatments will be determined by plant species, site characteristics, and management objectives.  A combination of approaches may be employed to achieve the most environmentally sound results including mechanical, biological, and chemical techniques or changes in land use.	Alternative B would provide a range of techniques for weed control by authorizing the use of biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale. (see Table 2-8 for descriptions of each method).  Emphasis would be placed on re-vegetation of disturbed and fire-damaged landscapes with healthy native vegetation communities that would not be susceptible to the establishment or spread of noxious weeds and invasive species.	Alternative C would only allow the removal of noxious weeds by hand tools.  Emphasis would be placed on re-vegetation of disturbed and fire-damaged landscapes with healthy native vegetation communities that would not be susceptible to the establishment or spread of noxious weeds and invasive species.	Alternative D would allow the widest range of techniques for weed control including the use of flaming (see Table 2-8 for descriptions of each method).  Emphasis would be placed on re-vegetation of disturbed and fire-damaged landscapes with healthy native vegetation communities that would not be susceptible to the establishment or spread of noxious weeds and invasive species.
Vegetation Resource Uses: Livestock Grazing			
Alternative A would continue livestock grazing management in the four allotments that overlap the NCA, under the current terms and conditions of the grazing permits and approved grazing management strategies.  This alternative would result	Alternative B would reduce permitted use to the average of 20 years of actual use; 1,861 initial AUMs of livestock forage would be provided under this alternative.  Grazing utilization levels would be set at 40% of the current year’s growth, which	Alternative C would make the entire NCA unavailable to livestock grazing over the life of the RMP (63,480 total acres). The overall impact to livestock grazing from this alternative would be major and long term. Permittees who are unable to graze on	Alternative D impacts would be similar to those identified under Alternative A, with two exceptions. Grazing utilization levels would be set at 45% of the current year’s growth, potentially reducing the amount of for age available for livestock grazing.

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
in no changes from current conditions and, therefore, no impacts to the livestock grazing management or livestock operators.	could further reduce the amount of forage available for livestock grazing. This alternative could result in minor to moderate impacts on livestock grazing and could limit the ability of operators to fully utilize the resources within an allotment. Minor negative impacts and/or beneficial effect from other resource uses under this alternative may also affect livestock grazing.	public lands in the NCA could experience substantial cost increases for their operations, potentially to the point where remaining in the livestock business may not be economically feasible.	The construction of range improvements would only be authorized if they further the purposes of the NCA and benefit diverse resource values. Compared to Alternative A, this action could limit the flexibility in constructing range improvements and could limit the ability of operators to fully utilize the resources within an allotment.
Vegetation Resource Uses: Plant Materials			
This alternative continues the prohibition on the sale of forest products and plant materials on the majority of the NCA (Beaver Dam Slope ACEC). Native Americans would be able to use these resources for religious, ceremonial, and traditional purposes, providing a beneficial effect.	Under all Alternative, all public lands within the NCA would be closed to commercial and non-commercial harvesting of forest products, desert plants, plant materials, and seed collection, helping to conserve and protect the viability of native vegetation communities.  The collection of plant materials, plants, seeds, cuttings, and biological soil crust communities for research, conservation, and future use, following established protocols, providing sources of locally-collected materials for restoration projects in the NCA.  Native Americans would be able to use these resources for religious, ceremonial, and traditional purposes, providing a beneficial effect.		
Special Status Species (including BLM Sensitive)			
Under all Alternative, special status species habitats and populations would continue to be managed in compliance with laws, regulations, and agency policies, and in furtherance of the goals of approved USFWS Recovery Plans, assisting the recovery and delisting of these species.  Under all Alternative, public lands within the NCA that support populations of and habitats for special status species in the NCA would be retained in federal ownership.  Under all Alternative, acquisitions of non-federal lands within the NCA would be pursued, potentially assisting the conservation, protection, and enhancement of special status species.			
Wildlife			
Under Alternative A, special status species populations and habitats would continue to be managed in compliance with laws, regulations, and agency policies, and in furtherance of the goals of approved USFWS Recovery Plans. Habitat degradation and loss to wildfires and drought would continue, as this alternative does not emphasize full suppression of all wildfires and the development of large scale fuel breaks. Surface disturbances	Management of the NCA to “conserve, protect, and enhance” a broad range of resource values under Alternative B would benefit special status species and their habitats. Changes are proposed for those land uses, such as livestock grazing, recreation, and the granting of ROWs, to minimize negative impacts on the ecological values that comprise quality habitats for special status species. The management of wildfires and hazardous fuels	Alternative C would focus on resource protection by limiting land uses and authorized activities that have the potential to negatively impact special status species and their habitats. Management would employ the least invasive tools and methods and emphasize the use of native vegetation to restore and improve habitats.	Impacts would be the same as Alternate B.

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
related to wildfires, livestock grazing at current levels in burned and unburned habitats and riparian areas, unmanaged dispersed camping, and other recreational activities would continue to degrade, fragment, or destroy habitats for some special status species.	would be more comprehensive and effective, when compared to Alternative A, helping to lessen the threat that wildfires will continue to pose on special status species and their habitats in the NCA and throughout the Mojave Desert.		
Other Fish and Wildlife Species			
Under Alternative A, native fish and wildlife populations and their habitats would continue to be managed in compliance with laws, regulations, and agency policies, and in furtherance of relevant UDWR management plans. Habitat degradation and loss to wildfires would continue, as this alternative does not emphasize full suppression of all wildfires and the development of large scale fuel breaks. Surface disturbances related to wildfires, livestock grazing at current levels in burned and unburned habitats and riparian areas, unmanaged dispersed camping, and other recreational activities would continue to degrade, fragment, or destroy habitats for some wildlife species.	Management of the NCA to “conserve, protect, and enhance” a broad range of resource values under Alternative B would benefit fish and wildlife. Changes are proposed for those land uses, such as livestock grazing, recreation, and the granting of ROWs, to minimize negative impacts on the ecological values that comprise quality habitats for native species: native vegetation communities, soils, and water resources. The management of wildfires and hazardous fuels would be more comprehensive and effective, when compared to Alternative A, helping to lessen the threat that wildfires will continue to damage wildlife populations in the NCA.	Under Alternative C, the BLM would focus on resource protection by limiting land uses and authorized activities that have the potential to negatively impact native species and their habitats. Management would employ the least invasive tools and methods and emphasize the use of native vegetation to restore and improve habitats.	Impacts/benefits would be the same as Alternative B.
Heritage Resources			
Under all Alternative, Congressional segregations, management, and uses identified in OPLMA Section 1975 provide protections for heritage resources from: entry, appropriation, and disposal under the public land laws; location, entry, and patenting under the mining laws; and operation of the mineral leasing, mineral materials, and geothermal leasing laws. All Alternative would provide a similar level of conservation and protection for heritage resources within the context of undertakings and compliance with the requirements under Section 106 of the NHPA.			
Use Allocations would not be specifically made for heritage resources under this alternative. Management would be consistent with legal requirements and agency policies.	Allocating and managing 100% of the National Register-eligible sites to Scientific, Conservation for Future Use, and Public Use within the NCAs would conserve, protect, and enhance heritage resources for appropriate uses.		

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Alternative A would continue to manage the NCA as a ROW Avoidance area, providing a moderate level of protection for heritage resources from development-related impacts outside of the designated utility corridor.	Alternative B would manage the NCA as a ROW Exclusion area for linear ROWs, retain the designated corridor along Old Highway 91, but limit new ROWs for utilities to underground installations. Site-type ROWs would need to meet specific criteria to be authorized in the NCA. This alternative provides a higher level of protection for heritage resources related to the potential development of utilities outside of the designated utility corridor, when compared to Alternative A.	Alternative C would manage the NCA as a ROW Exclusion area and revoke the designated utility and transportation corridor along Old Highway 91, providing the highest level of protection for heritage resources, as it relates to the potential development of linear and site-type ROWs that could adversely affect historic properties.	Impacts/benefits same as Alternative B.
Under Alternative A, livestock grazing would continue under the current season of use and permitted AUMs. Livestock would continue to have the potential to impact heritage resources, by displacing artifacts or damaging architectural features or rock art.	Under this alternative, livestock AUMs would be reduced, lessening the potential for impacts on heritage resources related to grazing.	Under this alternative, the NCA would be unavailable for livestock grazing over the life of the RMP, eliminating a land use that has the potential to impact heritage resources.	Same as Alternative A.
National Historic Trails			
Alternative A would not emphasize the identification and protection of high potential segments or trail traces or artifacts for public use and enjoyment, through the identification and management of an OST Management Corridor. This alternative would manage the OST based on the requirements of the National Trails System Act, <i>BLM Manual 6280</i> , and adopt relevant provisions of the <i>Comprehensive Management Plan for the OST</i> , when it has been completed by BLM and the NPS as joint administrators.	The designation of an approximately 12,506 acre OST Management Corridor would help to further the protection of the setting and any physical evidence of the historic trail for public use and enjoyment. Management actions are proposed for the Management Corridor relating to Recreation and Visitor Services, Travel and Transportation Management, Visual Resource Management and Lands and Realty that are designed to conserve, protect, and restore the integrity of the setting and any trail-related heritage resources from adverse impacts. These Alternative would also provide education and interpretation opportunities that would enhance awareness and appreciation of the Old Spanish NHT. Direct and indirect, moderate, short and long-term beneficial effects would be expected to result from implementation of these actions.		



Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>National Natural Landmark</b>			
Portions of the 1,047-acres Joshua Tree NNL no longer contain healthy Joshua tree woodlands. For the remaining healthy stands, management actions that reduce fire potential, such as fuels management would help protect the area’s special values. Livestock grazing of surrounding areas, and increased human presence for recreation and especially the discharge of firearms could increase the chances of wildland fire.	All Alternative would prioritize the protection of late successional shrublands, including unburned Joshua trees in the NNL and elsewhere in the NCA, through appropriate fire suppression tactics and hazardous fuel reduction. Restoration of fire damaged native vegetation communities would emphasize the use of native species and minimize disturbances to soils and biological soil crusts, to prevent noxious weed and exotic invasive species infestations. Management Alternative for other resource programs and uses would further the goals of conservation and protection of the Mojave Desert ecological values that warranted administrative designation, within the current or adjusted boundaries of the NNL.		
<b>Areas of Critical Environmental Concern</b>			
The Beaver Dam Slope ACEC designation would remain in place under Alternative A.	National Conservation Area status provides protections that are equal to or superior to those provided by ACEC designation for all relevant and importance values. Congressional segregations, management, and uses identified in OPLMA Section 1975 provide protections that are equal or superior to those provided by ACEC designation for: entry, appropriation, and disposal under the public land laws; location, entry, and patenting under the mining laws; and operation of the mineral leasing, mineral materials, and geothermal leasing laws. Retaining the ACEC designation would be redundant and unnecessary. The ACEC designation would also be revoked for the 3,447 acres of the ACEC that are outside the NCA, but within two designated utility corridors. These acres support populations of threatened Mojave desert tortoise and are designated critical tortoise habitat.		
<b>Visual Resource Management</b>			
Impacts to visual resources could occur from linear and site-type ROWs, though avoidance and site-sharing on most of the NCAs would reduce this. Managing the Beaver Dam Wash NCA as VRM Class III could allow visual impacts that dominate the landscape.	Alternative B is slightly less protective of visual resources than Alternative C. In this alternative, a narrow ROW corridor would be designated on both sides of Highway 91. Utility development would be limited to underground installations, similar to the existing fiber optic lines already on the east side of the highway. Because the underground installation is low impact to visual resources, the VRM Class II designation remains appropriate.	Alternative C provides the highest protection for visual resources. Designating all acres as VRM Classes I and II, with an overlapping designation of ROW Exclusion, would prohibit surface disturbing activities and protect all components of the VRI. The beneficial effects would be both direct and indirect, as the scenic quality of the NCA would be preserved by prohibiting future utility, road, and highway development. This alternative would also protect the high sensitivity of the Old Highway 91 viewshed.	Impacts would be the same as Alternative B.

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Natural Soundscapes</b>			
No management actions to address Natural Soundscapes.	Solitude is a consistent component of Backcountry and Primitive Recreation Management Zones and is closely correlated with natural quiet. Visitors have ample opportunity within the NCA to experience natural quiet. It is not possible to adequately quantify the value of natural soundscapes to visitors until such time as acoustic data has been collected and analyzed.		
<b>Lands with Wilderness Characteristics</b>			
Lands with wilderness characteristics would be managed as a ROW Avoidance area, under Class III for VRM, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuel wood harvesting and seed and plant material collection. Management would provide a moderate level of protection for lands with wilderness characteristics.	Lands with wilderness characteristics would be managed as ROW Exclusion area, under VRM Class II, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuel wood harvesting, seed and plant materials collection. Management would provide a higher level of protection for lands with wilderness characteristics, when compared to Alternative A.	Lands with wilderness characteristics would be managed as ROW Exclusion area, under VRM Class I, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuel wood harvesting, seed and plant collection. Management would provide the highest level of protection, when compared to Alternative A, B, and D. Management under VRM Class I would increase the protection of opportunities for solitude and primitive recreation.	Management of lands with wilderness characteristics would be the same as Alternative B, conferring the same benefit and protections for lands with wilderness characteristics.
<b>Recreation and Visitor Services</b>			
ERMA management would provide the minimum level of recreation management and opportunities.	Establishing SRMAs and RMZs in the NCA and increased public education efforts would provide more focused recreation opportunities and better visitor information. Also, some commercial, competitive, large-group, and camping opportunities could be reduced or have more restrictions because of efforts to protect special status species habitats. Expanding the non-motorized trail systems in the NCAs would increase opportunities for backpacking and hiking.	Impacts on recreation and visitor services would be similar to Alternative B, except increased efforts to protect critical habitats could increase some of the restrictions on recreation use.	Impacts on recreation and visitor services would be similar to Alternative B, except some restrictions on competitive events and camping would be reduced.
<b>Comprehensive Travel and Transportation Management</b>			
Congress, through OPLMA Section 1975 (e) (3) A and B, addressed OHV travel in the Beaver Dam Wash NCA, by designating three geographic areas, labeled “Designated Road Areas,” where such travel (except for emergency and administrative purposes) was to be permitted only on the roads displayed on the legislative map (Map 3-26). In areas outside of the “Designated Road Areas,” OHV area designation is “Limited to Designated Roads and Trails,” the specific routes available for travel in these areas will be determined through a separate Travel Management Plan process. Under all alternatives, there would be no variation in OHV area designations. The designation of “Limited to Designated Roads and Trails” applies to the entire NCA.			

Table 2-35 Comparative Summary of Impacts for Beaver Dam Wash NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Lands and Realty</b>			
Alternative A would continue the current designation of the NCA as a ROW Avoidance area and maintain the designated corridor of variable widths along Old Highway 91. New ROWs for linear and site-type ROWs could continue to be granted, within the designated corridor and at existing communication sites. New ROWs could potentially be granted elsewhere in the NCA, if specific criteria identified in the 1999 RMP are met.	Alternative B would manage the NCA as a ROW Exclusion area for linear ROWs, retain the designated corridor along Old Highway 91, but limit new ROWs for utilities to underground installations. Site-type ROWs would need to meet specific criteria to be authorized in the NCA. This alternative would restrict the types of land use authorizations that could be made, creating a negative and minor to moderate impact on the Lands and Realty program.	Alternative C would manage the NCA as a ROW Exclusion area for linear and site type ROWs and the existing Old Highway 91 designated corridor would be revoked through the NCA. The impacts on the authorization of land use ROWs would be negative, moderate to major and long-term on the Lands and Realty program.	Impacts would be the same as Alternative B.
<b>Socioeconomics</b>			
<i>Economic Impacts – Nonmarket Values</i>			
Provides some protections of nonmarket values, but would probably result in some losses and would forego enhancement of values.	Compared to Alternative A, this alternative provides greater protection and enhancement of most nonmarket values.	Compared to Alternative A and B, this alternative provides greater protection and enhancement of most nonmarket values. Would not support nonmarket values associated with grazing and ranching.	Impacts would be the same as Alternative B.
<b>Social Impacts</b>			
Motorized Recreation Stakeholders, Livestock Grazing Stakeholders, and Economic Development Stakeholders would view favorably. Unsatisfactory to Habitat and Resource Conservation Stakeholders. Mixed views by Non-Motorized Recreation Stakeholders.	Relative to Alternative A, would be favored by Habitat and Resource Conservation Stakeholders, less preferred by Livestock Grazing Stakeholders, and Economic Development Stakeholders. Similar to Alternative A for Motorized Recreation Stakeholders, Non-Motorized Recreation Stakeholders.	Relative to Alternative A and B, would be favored by Habitat and Resource Conservation Stakeholders. Least preferred alternative for Livestock Grazing Stakeholders, and Economic Development Stakeholders. Similar to Alternative A for Motorized Recreation Stakeholders, Non-Motorized Stakeholders, Non-Motorized Recreation Stakeholders.	Similar to Alternative B for Motorized Recreation Stakeholders, Non-Motorized Recreation Stakeholders. Similar but somewhat less preferable to Alternative B for Habitat and Resource Conservation Stakeholders and Livestock Grazing Stakeholders. Mixed views by Economic Development Stakeholders.

2.3.2 Red Cliffs NCA Alternative Tables

Table 2-36 Air Quality

Table 2-36 Air Quality			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Federal and state air quality standards are met in the NCA.		
Objectives			
BLM’s objective for airshed management will be to ensure that authorizations granted to use public lands, and BLM’s own management programs will comply with and support local, state, and federal laws, regulations, and implementation plans pertaining to air quality.	Air quality is improved by reducing windblown dust levels from motorized vehicle travel on unpaved roads and from the loss of vegetative cover to wildfires.  Short-term air quality impacts (e.g., smoke, haze, windblown dust) that result from wildfires are minimized through appropriate fire suppression responses and through proactive management to minimize the potential for future wildfires.  Research that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect air resources and climate change is supported.		
Management Guidance Common To All Alternatives			
Apply BMPs and other site-specific mitigation measures to maintain soil stability, protect physical and biological (cryptogamic) soil crusts, and minimize wind erosion of soils (refer to Appendix F for a complete list of BMPs for all programs and resources).			
Management Actions			
All BLM actions and use authorizations will be designed or stipulated so as to protect the high-quality airshed within Zion National Park and other Class I areas in the region and to otherwise minimize impacts to visibility.	Reclaim closed routes that are not required for administrative purposes, non-motorized recreational uses, or as fire breaks. Use appropriate methods on reclaimed routes (e.g., soil binders, vertical mulching) to minimize windblown dust until vegetative cover has been restored.  Use aggregate, gravel base, or other environmentally-acceptable soil binders, as needed, at major trailheads, waysides, and high-use recreation sites, and on BLM-maintained roads to minimize windblown dust.  Coordinate with Washington County Public Works Department to post speed limits on unpaved roads, as needed, to lessen windblown dust created by motorized vehicle travel.  Implement post-wildfire ES&R actions that will stabilize soils and re-establish vegetative cover to minimize windblown dust levels.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to minimize new surface disturbances that would contribute to increased soil erosion and windblown dust.		
Scientific Research			
No similar action.	Pursue opportunities to install air quality monitoring equipment and collect data on ozone levels, visibility (haze) and other appropriate air quality indicators through federal and non-federal grants; partnerships with other federal agencies, state, tribal and local governmental entities, academic institutions, and private entities; and through cooperative agreements or other appropriate methods).		
Climate Change Monitoring			
No similar action.	Pursue opportunities to install one or more solar-powered weather stations in the NCA to collect data on temperature, precipitation, wind speed, humidity, soil moisture, solar radiation, and other variables that could signal changing climatic conditions.  Pursue opportunities for scientific studies to determine the carbon sequestration value of intact desert shrublands and the potential of degraded desert shrubland restoration to mitigate increasing atmospheric carbon dioxide levels that are contributing to global warming.		



Table 2-37 Water Resources

Table 2-37 Water Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Water resources are conserved and protected to fulfill the purposes of the NCA and sustain ecosystem resiliency under changing climatic conditions.		
Objectives			
BLM’s objectives for soil and water resources will be to work with municipalities, state and local agencies, and other interested parties to:  a) Protect community water-sheds and sources of culinary water;  b) Reduce erosion, stream sedimentation, and salinization;  c) Improve water quality in streams and rivers;  d) Promote water conservation;  e) Ensure compliance with state and federal laws per-taining to water quality and pollution prevention;  f) Ensure water availability for the maintenance of key natural systems and human enjoyment;  g) Where necessary to meet essential community needs, identify environmentally suitable sites for water stor-age and routes for water transport.  BLM will comply with the provisions of Executive Orders 11988 and 11990 that require federal agencies to protect wetlands under their jurisdiction and avoid devel-opment within floodplains wherever possible.	Surface water quality is suitable for appropriate beneficial uses, complies with approved federal and state standards, and meets or exceeds the applicable Utah Standards and Guides (Appendix D).  Salinity and sediment loads in the Virgin River do not increase as a result of land uses and authorized activities on public lands in the NCA.  Research is supported that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect water resources (e.g., fire cycles, vegetation succession) and that may influence climate change.		

Table 2-37 Water Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Management Guidance Common To All Alternatives</b>			
Apply BMPs and other site-specific mitigation measures to maintain soil stability, minimize wind and water erosion, and ensure that surface disturbances do not cause accelerated sedimentation in surface water sources. Inspect construction-related equipment and vehicles for petroleum and other chemical leaks when they arrive on-site.			
Implement post-fire ES&R actions to restore riparian vegetation and minimize soil erosion that could impair water quality in springs, seeps, Leeds Creek, Quail Creek, and the Virgin River.			
In planning re-vegetation projects for disturbed or fire-damaged riparian areas, identify specific resource and management objectives, desired plant communities, and methods that are ecologically sustainable, likely to achieve desired outcomes, and that minimize new surface disturbances and impacts on other resource values of the NCA.			
Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments in meeting management objectives. Conduct monitoring, as determined by the project-specific monitoring plans, to evaluate effectiveness of re-vegetation and ES&R actions.			
Monitor water quality in Leeds Creek to determine if the designation standard for beneficial uses established by the UDWQ is being met.			
Monitor fecal coliform levels in natural water catchments along the Red Reef Trail during high visitor use periods.			
<b>Management Actions</b>			
BLM will coordinate with local and state agencies as water protection plans are developed to ensure that federal land management actions or practices do not jeopardize drinking water quality.	Pursue acquisition of non-federal lands from willing sellers within the NCA that would benefit the conservation and protection of surface and groundwater resources.  Pursue acquisition of surface and groundwater rights from willing sellers to benefit the conservation and protection of wildlife and improve aquatic habitats and riparian resources.  Do not authorize land uses that would export water from the NCA.  Work through the State of Utah's water rights system to ensure that BLM obtains water rights on all inventoried point water sources (springs, seeps, wells, reservoirs, etc.) for authorized beneficial uses of water within the NCA, including wildlife, recreation, domestic use within visitor facilities, and the improvement of aquatic habitats and riparian resources.		
Meet the goals of the Colorado River Basin Salinity Control Act by implementing administrative actions in this Plan and continuing to require the use of BMPs in areas of highly erodible, saline soils to reduce or prevent the movement of salts into drainages and waterways that flow into the Virgin River or its tributaries.			
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to protect water quality in streams, springs, seeps, and associated riparian areas.		
<b>Scientific Research</b>			
No similar action.	Inventory the NCA to locate all springs and seeps, map the areal extent of associated riparian vegetation, evaluate water quality and flow rates, and document all spring developments.		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities to develop a conceptual groundwater model of quantity recharge of springs, seeps, and surface flows within and adjacent to the NCA.  Pursue opportunities to collect data and monitor changes in precipitation patterns (e.g., timing, frequency, intensity of events) that are predicted to alter surface and ground water quantity and availability.		

Table 2-38 Geologic and Paleontological Resources

Table 2-38 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Paleontological resources, unique geologic features, and examples of geologic processes are conserved and protected for the benefit and enjoyment of present and future generations, consistent with the mandates of OPLMA and the legislative purposes for which the Red Cliffs NCA was Congressionally-designated.		
Objectives			
In managing cultural and paleontological resources on public lands, BLM will seek to:  a) Employ reasonable measures and land use controls needed to reduce impacts from urbanization and human encroachment;  b) Apply the principles of conservation management to selected areas to maintain such resources in their present condition for future study and enjoyment;  c) Reduce looting and vandalism through increased public education, surveillance, and enforcement;  d) Provide for legitimate field research by credible scientists and institutions,  e) Ensure compliance with applicable state and federal laws for consultation, assessment, and mitigation including consultation with interested or affected Indian tribes;  f) Provide for stabilization, maintenance, and interpretation of selected sites for public enjoyment and education.	Scientifically important paleontological and geological resources are identified, managed, and allocated to appropriate uses that increase knowledge about geological processes and the history of life on Earth.  Designate paleontological resources currently documented or projected to occur in the NCA to Use Allocations (as defined by BLM <i>Manual Section 8110.42 and Land Use Planning Handbook H-1601-1</i> ). Focus on the Use Allocations that are consistent with the legislative mandate from OPLMA for the NCA: Scientific Use, Conservation for Future Use, and Public Use. Do not allocate resources of scientific interest to Traditional Use, Experimental Use, or Discharged from Management, as these would not be consistent. See Table 2-4 for descriptions of each Use Allocation category.		
Management Guidance Common to All Alternatives			
Regular monitoring patrols and condition assessments are conducted at fossil localities in the NCA by BLM staff and trained volunteer Site Stewards.			
No commercial sale or use of petrified wood is permitted in the NCA.			
Management Actions			
No similar action.	Conduct paleontological surveys in areas with high potential for scientifically important fossil localities (Potential Fossil Yield Categories Classes 3, 4, and 5).		

Table 2-38 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Allocate and manage 100% of trackways, vertebrate, and paleo-botanical fossil localities for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of trackways, vertebrate, and paleo-botanical fossil localities for Scientific Use and Conservation for Future Use.	Same as Alternative B.
No similar action.	Allocate and manage 100% of invertebrate fossil localities for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of invertebrate fossil localities for Scientific and Conservation for Future Use.	Same as Alternative B.
No similar action.	Authorize the use of hand tools by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits to conduct site-specific paleontological field studies and specimen collections at localities allocated to Scientific Use and Conservation for Future Use.		
No similar action.	Authorize the use of mechanized equipment on a case-by-case basis by researchers holding valid NCA Scientific Research Permits or BLM Paleontological Resources Excavation Permits to conduct site-specific paleontological field studies and specimen collections at localities allocated to Scientific Use and Conservation For Future Use.	Do not authorize the use of mechanized equipment for geological and paleontological field studies.	Same as Alternative B.
No similar action.	Prohibit the collection of common invertebrate fossils for commercial or personal use.	Same as Alternative B.	Allow the casual collection of reasonable amounts of common invertebrate specimens for personal use, either by surface collection or the use of non- powered hand tools that result in negligible surface disturbance.
The collection of petrified wood on public lands is limited to 250 pounds per person per year for personal use only. No commercial use will be permitted to avoid the rapid depletion of the resource.	Prohibit the collection of petrified wood for personal use (as defined by federal regulations in 43 CFR 3622).	Same as Alternative B.	Allow the collection of petrified wood for personal use, consistent with federal regulations in 43 CFR 3622, either by surface collection or the use of non- powered hand tools that result in negligible surface disturbance.
No similar action.	Monitor high significance (scientific or interpretive) sites with fossil resources that are not feasible or desirable to excavate or collect to document their condition. The frequency of monitoring action for identified sites would be determined by the physical nature of the resource and potential threats. When monitoring indicates the need, management actions would be taken to conserve and protect these resources through physical measures and land use restrictions.		



Table 2-38 Geologic and Paleontological Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Scientific Use:</i>			
No similar action.	Authorize surface collection and excavation of unique and scientifically important fossil specimens by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits.		
<i>Conservation for Future Use:</i>			
No similar action.	Only authorize surface collection of unique and scientifically important fossil specimens by researchers holding valid NCA Scientific Research Permits and BLM Paleontological Resource Use Permits if specimens are at risk of theft, vandalism, or loss to natural erosion and if feasible methods for in-situ protection are not available.  Monitor localities allocated to Conservation for Future Use on a regular basis, with monitoring frequency to be determined by the nature of the resource and potential threats.		
<i>Public Use:</i>			
No similar action.	Prior to developing a locality for public use ensure the paleontological resources at the site and in the surrounding area have been fully documented.  Install informational signing and kiosks on site etiquette and PARPA at Public Use sites (e.g., trails, trailheads) where appropriate.		
<b>Public Education and Interpretation</b>			
BLM will collaborate with local communities, organizations, local and state agencies, Indian tribes, and other interested parties in developing and implementing plans for the restoration, stabilization, protection, and/or interpretation of appropriate historical, archaeological, or paleontological sites and resources on public lands in Washington County.	Develop on and off-site interpretation for significant paleontological sites and specimens, and geological features to foster an appreciation for the unique nature of these resources.  Develop on and off-site interpretation for areas within the NCA where the geologic history of southwestern Utah can be observed and appreciated.  Support education outreach programs, activities, and volunteer opportunities that focus on paleontological resources and the geologic history of Earth.  Promote opportunities for volunteer involvement in Site Stewardship that increase public awareness of the need to conserve and protect at-risk fossil resources.  Promote opportunities for volunteer involvement in inventory and data recovery projects that enhance public understanding of the geologic and paleo-environmental history of the NCA.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities to conduct field inventories and increase the fossil locality database for the NCA in partnership with the Utah Geological Survey, natural history museums, academic institutions, avocational groups, and trained volunteers.  Recruit and train youth and veteran groups, citizen stewards, and other volunteers to participate in inventory and data recovery projects that enhance public understanding of the earth history of the NCA.		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities for scientific research studies at sites allocated to Scientific Use that collect paleo-environmental data that could serve as a baseline for comparison with modern climate trends.		

Table 2-39 Cave and Karst Resources

Table 2-39 Cave and Karst Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Cave and karst resources are conserved and protected for the benefit of present and future generations.		
Objectives			
No similar action.	Caves and karst resources are evaluated for significance, pursuant to the Federal Cave Resources Protection Act, and managed for appropriate uses such as conservation, scientific, recreational, and educational uses.		
Management Guidance Common to All Alternatives			
As needed, implement National White Nose Syndrome Decontamination Protocol and BLM IM 2010-18 in the management of cave resources that support bat populations.			
Management Actions			
No similar action.	Initiate systematic inventories in areas of the NCA with high potential for cave and karst resources.		
No similar action.	Evaluate newly identified cave and karst resources for significance under the criteria defined in the Federal Cave Resources Protection Act and 43 CFR Part 37. Propose significant caves and karst resources for inclusion in the National Cave System.		
No similar action.	Manage cave and karst resources evaluated as significant for Conservation for Future Use, Scientific Use, and Public Use.	Manage cave and karst resources evaluated as significant for Conservation for Future Use and Scientific Use.	Same as Alternative B.
No similar action.	Develop implementation-level Cave Management Plans for significant cave and karst resources that are identified for Public Use, to identify appropriate management objectives and actions needed to protect resource values.	No similar action.	Same as Alternative B.
Public Education and Interpretation			
No similar action.	Develop on-site interpretation for significant cave and karst resources that are managed for Public Use.	Develop off-site interpretation for significant cave and karst resources that are managed for Conservation for Future Use and Scientific Use.	Same as Alternative B.
Scientific Research			
No similar action.	Authorize scientific research in cave and karst resources that do not contain cultural or paleontological resources through NCA Scientific Research Permits. Where cultural or paleontological resources are present, authorize scientific research through permits issued under the legal authorities of ARPA and PARPA.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific research studies to collect data on cave biota and geologic processes that could serve as a baseline for comparison with modern climate trends.		

Table 2-40 Soil Resources

Table 2-40 Soil Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Soil resources function to sustain the ecological health, species biodiversity, and resilience of native vegetation communities and watersheds.		
<b>Objectives</b>			
BLM’s objectives for soil and water resources will be to work with municipalities, state and local agencies, and other interested parties to:  a) Protect community water-sheds and sources of culinary water;  b) Reduce erosion, stream sedimentation, and salinization;  c) Improve water quality in streams and rivers;  d) Promote water conservation;  e) Ensure compliance with state and federal laws per-taining to water quality and pollution prevention;  f) Ensure water availability for the maintenance of key natural systems and human enjoyment;  g) Where necessary to meet essential community needs, identify environmentally suitable sites for water stor-age and routes for water transport.	Native vegetation communities provide sufficient plant cover and litter accumulation to pro- tect soils from wind and water erosion.  Soils exhibit infiltration and permeability rates that are appropriate to specific soil types, land forms, and climatic variables.  Soil crusts are conserved, protected, and restored to perform vital functions such as enhanc- ing infiltration, maintaining soil stability, and facilitating plant growth or re-establishment.  Salinity and sediment contributions from public lands into the Colorado River system, via Quail Creek, Leeds Creek, and the Virgin River, are minimized through appropriate land use management.  Research is supported that increases the understanding of ecosystem processes, cycles, and anthropogenic factors that affect soil and vegetation resources (e.g., fire return, nutrient cycles) and that may influence climate change.		
<b>Management Guidance Common to All Alternatives</b>			
Apply BMPs and other site-specific mitigation measures to maintain soil stability, minimize wind and water erosion, and ensure that surface disturbances do not cause accelerated wind or water erosion.  Implement post-fire ES&R actions designed to minimize soil erosion and facilitate re-vegetation of desired native plant communities.			
<b>Management Actions</b>			
Meet the goals of the Colorado River Basin Salinity Control Act by implement- ing administrative actions in this Plan and continuing to require the use of BMPs in ar- eas of highly erodible, saline soils to reduce or prevent the movement of salts into drain- ages and waterways that flow	Minimize damage to or loss of top soil and soil crusts through project design, permit stipula- tions, and public education.  Locate new trails, trailheads, or other facilities on soils suitable for development, such as areas less prone to wind and water erosion and previously disturbed areas.		

Table 2-40 Soil Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
into the Virgin River or its tributaries.			
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public land use etiquette to protect soils and soil crusts.		
Scientific Research			
No similar action.	Pursue opportunities to complete detailed soil surveys and ecological site inventories in the NCA.  Pursue opportunities for scientific studies relating to soil crust function and regeneration in disturbed and fire-altered desert ecosystems.  Pursue opportunities for scientific studies that focus on developing cost-effective methods to restore biological (cryptogamic) soil crusts in disturbed and fire-altered desert ecosystems.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to collect data and monitor changes in the timing, frequency, and intensity of storms, flood events, and droughts and the effects of these climatic changes on soil crust function and regeneration.		



Table 2-41 Native Vegetation Communities

Table 2-41 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
CONSERVATION AND PROTECTION OF NATIVE VEGETATION COMMUNITIES			
Goal			
	Biodiversity, ecological integrity, and ecosystem resilience are conserved, protected, and re-stored in the unique native vegetation communities created by the convergence of the Mojave Desert, Great Basin, and Colorado Plateau ecoregions.		
Objectives			
BLM’s overall objective for vegetation management will be to ensure that the amount, type, and distribution of vegetation on public lands in Washington County reflects desired plant communities. These are defined as plant communities that produce the kind, proportion, and amount of vegetation necessary to meet or exceed management objectives for a given ecological site. Development of such communities will sustain a desired level of productivity for wildlife, livestock, and nonconsumptive purposes while maintaining properly functioning ecological conditions. BLM will apply Utah Standards for <i>Rangeland Health and Guidelines for Grazing Management</i> (SGFO RMP Appendix 3) in managing its various resource programs and monitor the results to ensure vegetation management objectives are being met. Collaboration with affected operators, government agencies, Indian tribes, and interested organizations will be promoted to bring together resources needed to complete specific management plans, implement approved recommendations, and monitor and evaluate the results.	Native perennial and annual communities exhibit species diversity, suitable canopy cover, plant density, and age class diversification appropriate to each specific ecological site type.  Desired plant communities provide sufficient plant cover and litter accumulation to protect soils from wind and water erosion and to enhance nutrient cycling.  Loss of late-successional desert shrublands (e.g., creosote-bursage, blackbrush communities), perennial understory vegetation, and soil crusts to wildfires is minimized through management actions to prevent and suppress wildfires, and control or eradicate non-native invasive annual grass species ( <i>Bromus</i> spp.).  Resilience of native plant communities to climate change is maintained by re-introducing native species that have been lost or by introducing other appropriated native species.  Connectivity of native plant communities is maintained by restoring closed roads and other linear features that interrupt species dispersal.  Genetic integrity of native communities is protected by using source-identified seed and other plant materials for restoration and re-vegetation projects.  Research is supported that increases the understanding of ecosystem processes (e.g., vegetation succession), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., recreation) that affect vegetation communities and that may influence climate change.		
Management Guidance Common to All Alternatives			
Manage land uses and authorized activities to ensure that ecological systems meet or exceed management objectives identified in the Utah Standards and Guides (Appendix D).			

Table 2-41 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Apply BMPs and other management techniques designed to minimize impacts on native vegetation communities for all land uses and authorized activities.			
Management Actions			
Native Vegetation Communities Conservation:			
No similar action.	Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.		
Native Vegetation Communities Protection:			
Site specific plans to identify desired plant communities, establish specific management objectives, and recommend practices to be employed to achieve desired results, where appropriate, will be prepared in collaboration with affected livestock operators, the Utah Division of Wildlife Resources, the Washington County Water Conservancy District, and other interested parties, agencies, or organizations.	Implement landscape-level fuel breaks and hazard fuel reduction projects in partnership with adjacent federal and state land managing agencies.  Design fuel breaks and hazard fuel reduction projects to conserve and protect unburned native vegetation communities, evaluating factors such as vegetation types, seasonal wind direction, and expected fire behavior in project planning.  Design fuel breaks to incorporate topographic features, water courses, major ephemeral drainages, road networks, and utility corridors, to minimize new surface disturbances and the loss of native vegetation.  Design fuel breaks and hazard fuel reduction projects to utilize those methods that are environmentally sensitive and minimize new surface disturbances.  Employ appropriate wildfire suppression tactics to minimize loss of unburned and once-burned native vegetation communities, particularly late-successional desert shrublands.		
“Fire management actions would include full suppression, mechanical non-fire fuel treatments, and prescribed fire. Because of the suppression emphasis, the appropriate management response (AMR) would be applied to generally keep fire sizes small and fire would not play a large role in resource enhancement.” (BLM UT-040-04-054 2005).	Authorize the use of biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).	Authorize the use of hand removal, low impact mechanical methods, or a combination of these methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).	Authorize the use of biological controls, targeted grazing, flaming, hand removal, herbicides, mechanical methods, or a combination of methods to develop fuel breaks and hazard fuel reduction projects (see Table 2-8 for descriptions of each method).
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to protect native vegetation communities and prevent wildfires.		

Table 2-41 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Scientific Research</b>			
No similar action.	<p>Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in areas to be re-vegetated. Incorporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.</p> <p>Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.</p> <p>Pursue opportunities for scientific studies that evaluate the long term effectiveness of herbicidal treatments for exotic invasive annual grasses in arid ecosystems.</p> <p>Pursue opportunities for scientific studies to develop ecologically sustainable and cost-effective biological treatments to control and eradicate noxious weeds and non-native invasive annual grasses in arid ecosystems.</p>		
<b>Climate Change Monitoring</b>			
No similar action.	<p>Monitor the timing, frequency, and intensity of fall precipitation events in the NCA, as these events can be used to predict high invasive annual grass production in the following spring that will fuel catastrophic wildfires during the summer months.</p> <p>Resample vegetation study plots and monitoring transects established in the 1970s to determine if native plant species are shifting their elevational distribution in response to climate change.</p>		
<b>RIPARIAN VEGETATION</b>			
<b>Goal</b>			
	Riparian areas sustain productive and diverse ecosystems and properly functioning watersheds.		
<b>Objectives</b>			
BLM’s objective, to the extent practical, will be to manage riparian areas so as to maintain or restore them to properly functioning conditions and to ensure that stream channel morphology and functions are appropriate to the local soil type, climate, and landform.	<p>Healthy riparian areas are conserved and protected through land use restrictions, protective measures, and other management actions.</p> <p>Healthy riparian areas exhibit appropriate species composition and structural diversity to provide suitable forage, nesting or breeding habitats, and cover for diverse terrestrial and aquatic wildlife.</p> <p>Degraded riparian areas are restored to proper functioning condition or better, ensuring that stream channel morphology and functions are appropriate to the local soil type, climate, and landform.</p> <p>Employ the best available science relating to natural recovery patterns of riparian communities in arid lands.</p> <p>Research is supported that increases the understanding of ecosystem processes (e.g., vegetation succession), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., recreation) that affect riparian vegetation communities and that may influence climate change.</p>		
<b>Management Guidance Common to All Alternatives</b>			
Manage land uses and authorized activities to ensure that riparian areas meet or exceed management objectives identified in the Utah Standards and Guides (Appendix D).			
Employ appropriate wildfire suppression tactics to minimize impacts on riparian areas, while protecting firefighter and public safety and private property as first priorities.			
Apply BMPs and other management techniques designed to minimize impacts on riparian areas that may result from land uses and authorized activities.			

Table 2-41 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Management Actions</b>			
<i>Riparian Vegetation Conservation:</i>			
Monitoring studies will be established in riparian areas where increased recreation, OHV use, or grazing patterns are believed to be adversely impacting goals for riparian management. Impacts on key riparian species will be monitored...as resource conditions warrant and priorities allow. Regular monitoring of species and sites will be conducted to determine whether vegetative conditions and objectives are being achieved. If declining trends are identified, BLM will work with livestock operators, user groups, and other affected agencies, communities, or organizations to identify causes of the declining trends and to recommend and take corrective action.	Inventory riparian areas to establish baseline data on functioning conditions, trends in native plant composition, and infestations of noxious weeds and invasive species.  Pursue acquisition of non-federal lands within the NCA that would benefit the conservation, protection, and restoration of riparian areas.  Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.  Develop and implement re-vegetation plans for damaged riparian areas to minimize soil erosion and re-establish desired plant communities. Plans will specify seed/plant sources, seed/plant mixes, and soil preparation. Utilize salvage vegetation from the project area to the extent possible.  Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments in meeting management objectives.  Conduct monitoring, as determined by project-specific monitoring plan, to evaluate effectiveness of restoration and ES&R treatments.		
<i>Riparian Vegetation Protection:</i>			
Options may include, but are not limited to, fencing, barriers, selected closures, vegetative manipulations, seasonal use restrictions for camping or recreation, and adjustments in grazing management.	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach using biological controls, hand removal, herbicides, mechanical methods, or a combination of methods, depending on target species, infestation level, site characteristics, and project size (see <b>Table 2-8</b> for descriptions of each method).	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach through hand removal methods, depending on target species, infestation level, site characteristics, and project size (see <b>Table 2-8</b> for descriptions of this method).	Treat non-native woody species (e.g., tamarisk, Russian olive) in a phased approach using biological controls, flaming, hand removal, herbicides, mechanical methods, or a combination of methods, depending on target species, infestation level, site characteristics, and project size (see <b>Table 2-8</b> for descriptions of each method).
No similar action.	Allow adequate time between treatments for native woody species to establish in a treated area before treating adjacent patches.		
Options may include, but are not limited to, fencing, barriers, selected closures, vegetative manipulations, seasonal use restrictions for camping or recreation, and adjustments in grazing management.	Prohibit new surface disturbing projects or activities within 500 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions.	Prohibit new surface disturbing projects or activities within 1,000 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions.	Prohibit surface disturbing projects or activities within 250 feet of the edge of the riparian zone, except when the project would improve riparian resource conditions.



Table 2-41 Native Vegetation Communities			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about the ecological values of riparian areas and appropriate public land use etiquette to protect these areas.  Involve volunteers, schools, youth groups, veterans, and partner organizations in riparian resource monitoring and restoration projects to increase public awareness and foster citizen stewardship of NCA resources.		
Scientific Research			
No similar action.	Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in areas to be re-vegetated. Incorporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.  Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.  Collect and maintain baseline data on riparian vegetation species composition, noxious weeds, and non-native species infestations.  Pursue opportunities to develop and maintain baseline data on the terrestrial, avian, and aquatic wildlife that utilize these areas.  Pursue opportunities to develop baseline data on taxa found in the riparian areas that are not well studied, such as amphibians, insects, other invertebrates, fungi, and lichens.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to monitor the areal extent and species composition of riparian vegetation communities as a possible predictor of decreased precipitation and changes in seasonal precipitation patterns in the Mojave Desert.  Pursue opportunities to identify key riparian features within and adjacent to the NCA that must be protected to allow multi-species habitat connectivity and wildlife migration corridors under changing climate conditions.		

Table 2-42 Fire and Fuels Management

Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>FIRE SUPPRESSION</b>			
<b>Goal</b>			
	Wildfire suppression activities support the conservation and protection of NCA resource values and comply with legal, regulatory, and agency policy requirements.		
<b>Objectives</b>			
Fire suppression on public lands in Washington County will be directed by objectives and prescriptions identified in the Dixie Fire Management Plan scheduled for completion in 1999. The highest priorities of fire suppression will be to protect life, firefighter safety, property, and critical resource values. The BLM will coordinate with stakeholders at local and regional levels as well as adjacent land management agencies in formulating and implementing the final Fire Management Plan.	Suppression activities prioritize firefighter and public safety, protect private property, conserve and protect NCA resource values, and minimize overall suppression costs through planning and efficient management of tactical and human resources.  Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that affect the fire return intervals that influence climate change.		
<b>Management Guidance Common to All Alternatives</b>			
Employ rapid and appropriate suppression responses to minimize fire size and duration in the NCA.			
<b>Management Actions</b>			
In both the Beaver Dam Slope ACEC and the Washington County HCP Reserve, BLM will suppress wildfires in accordance with the guidelines in Fighting Wildfire in Desert Tortoise Habitat: Considerations for Land Managers, (T. Duck et al, 1994 – Desert Tortoise Council; International Symposium of Wildland Fire, 1995). Generally, the guidelines call for applying the principle of “minimum tool.” Under this concept, BLM will use the least disruptive approach to initial attack and fire suppression needed to extinguish the fire and meet other resource objectives for the affected area. Qualified resource advisors will be on-site during fire suppression to guide firefighter activities so as to minimize harm to	Conserve and protect unburned areas through appropriate fire suppression responses, while prioritizing firefighter and public safety and the protection of private property.  Utilize qualified Resource Advisors to guide suppression actions for all fires to help ensure that ecological systems and resource values are conserved and protected to the maximum extent possible.		

Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
tortoises and important habitats.			
No similar action.	Evaluate the use of “back-burning” as a fire suppression tactic in late successional shrublands on a case-by-case basis. Require NCA Manager approval prior to employing this tactic.	Prohibit “backburning” as a fire suppression tactic in late successional shrublands.	Evaluate the use of “back-burning” as a fire suppression tactic in late successional shrublands on a case-by-case basis. Require Resource Advisor approval prior to employing this tactic.
Wildland Fire Use:			
“Wildland fire use is not allowed" (BLM UT-040-04-054 2005).	Do not authorize wildfire use in the NCA, as there are no fire-adapted vegetative communities present in which fire has historically played an important role in ecosystem function.		
Management-Ignited (Prescriptive) Fire:			
“Fire management actions would include full suppression, mechanical non-fire fuel treatments, and prescribed fire. Because of the suppression emphasis, the appropriate management response (AMR) would be applied to generally keep fire sizes small and fire would not play a large role in resource enhancement.” (BLM UT-040-04-054 2005).	Do not authorize the use of management-ignited (prescriptive) fire in any of the ecological systems of the NCA for hazard fuel reduction or vegetation type conversions, as these are not fire-adapted communities in which fire has historically played an important role in ecosystem function.  Prescriptive fire could be authorized as part of scientific studies, as described below under Scientific Research.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about fire prevention and reporting wildfires.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about native vegetation communities and why fire did not historically play an important role in ecosystem function for these communities.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies that will develop reliable methods to forecast catastrophic wildfire seasons using the timing of fall and winter precipitation events.		
No similar action.	Only authorize the use of prescriptive fire for research purposes as part of scientific studies authorized under an NCA Research Permit and other required permits.	Do not authorize the use of prescriptive fire for research purposes in the NCA.	Same as Alternative B.
No similar action.	Do not authorize prescriptive fires for research purposes within designated critical habitat for the Mojave desert tortoise or other federally-listed species.  Do not authorize prescriptive fires for research purposes in unburned late successional shrublands, including blackbrush or other communities.		

Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Limit the size of prescriptive fires for research purposes to no more than one acre for all studies proposed under an NCA Research Permit.	Do not authorize the use of prescriptive fire for research purposes in the NCA.	Limit the size of prescriptive fires for research purposes to no more than five acres for all studies proposed under an NCA Research Permit.
Climate Change Monitoring			
No similar action.	Pursue opportunities to install one or more solar-powered weather stations in the NCA to collect data on temperature, precipitation, wind speed, humidity, soil moisture, solar radiation, and other variables that could signal changing climatic conditions that influence wildfire frequency and severity.		
ES&R AND OTHER NATIVE VEGETATION COMMUNITY RESTORATION			
Goal			
	Biodiversity, ecological integrity, and ecosystem resilience are restored in disturbed and fire-damaged native vegetation communities.		
Objectives			
BLM will conduct rehabilitation of lands affected by wildfire in accordance with provisions of the approved Dixie Normal Fire Rehabilitation Plan (1997). Any rehabilitation will require site-specific analysis including full cultural resource inventories on lands to be disturbed and appropriate consultation. In all cases, BLM will apply standards and guidelines approved for various resources included in Utah BLM’s Standards for Rangeland Health and Guidelines for Grazing Management (SGFO RMP Appendix 3). Deference will be given to the use of least disruptive practices in areas being managed primarily for their natural values, including primitive recreation areas, designated wilderness areas, riparian zones, areas of critical environmental concern, and rivers recommended as suitable for inclusion in the National Wild and Scenic Rivers System.	Species richness and landscape heterogeneity are re-established in disturbed and fire-damaged vegetation communities through restoration projects and post-fire ES&R actions.  Progress is made toward restoration of late successional shrublands.  Genetic integrity of native communities is protected by using source-identified seeds and other plant materials for restoration and re-vegetation projects.  Restoration methods employ the best available science relating to natural recovery patterns of native vegetation communities.  Research is supported that increases the understanding of ecosystem processes (e.g., role of soil crusts, gramnivores, herbivores), cycles (e.g., fire return, nutrient cycles), and anthropogenic factors (e.g., recreation) that affect the re-establishment of native vegetation communities and that may influence climate change.		
Management Guidance Common to All Alternatives			
Apply BMPs and other management techniques designed to minimize loss of top soil and soil crusts during restoration projects and ES&R actions.			
In planning re-vegetation projects for disturbed and fire-damaged areas, identify desired plant communities and use			



Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
ecologically sustainable methods that minimize new surface disturbances and impacts on other resource values of the NCA. Establish monitoring plots and use desired plant species frequency, density, and distribution data to evaluate the effectiveness of the treatments. Conduct monitoring to evaluate effectiveness of re-vegetation and ES&R actions, as determined by the project-specific monitoring plans.			
Management Actions			
Site specific plans to identify desired plant communities, establish specific management objectives, and recommend practices to be employed to achieve desired results, where appropriate, will be prepared in collaboration with affected livestock operators, the Utah Division of Wildlife Resources, the Washington County Water Conservancy District, and other interested parties, agencies, or organizations.	Implement a program to strategically collect, store, and increase native seeds, cuttings, biological soil crust communities and species for conservation and for use in future restoration projects. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.  Maximize the use of microsites of fertile soils (“fertile islands”) and areas where biological soil crusts are regenerating.  Authorize the use of artificial water, carbon sequestration soil treatments, or other methods that have been shown to increase success of restoration efforts in desert ecosystems.  Authorize the inoculation of cryptogamic soil crust species or mycorrhizae to restore biological soil crusts and assist plant establishment.		
The use and perpetuation of native plant species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, nonintrusive and non-native species will be approved for use where native species: a) Are not available; b) Are not economically feasible; c) Cannot achieve ecological objectives as well as non-native species; and/or d) Cannot compete with already established non-native species.	Authorize use of native seeds, plant materials, and native plant cultivars for re-vegetation efforts, in the following order of preference:  1. Locally derived sources; 2. Regionally derived sources.  Only authorize use of non-native plant species when all the following criteria are met:  a) Desired native species are not available; b) The natural biological diversity of the treatment area would not be diminished; c) Exotic and naturalized species can be confined within the treatment area;  d) Restoration of native vegetation species would be facilitated by use of the non-native species;  e) Use of non-native species would benefit threatened and endangered species, including the desert tortoise.	Authorize the use of native seeds and plant materials from locally derived sources for re-vegetation efforts.  1. Locally derived sources; 2. Regionally derived sources; 3. Native to the Mojave Desert ecoregion.  Only authorize use of non-native plant species when the following criteria are met:  a) Desired native species are not available; b) Exotic and naturalized species can be confined within the treatment area.	Authorize the use of native seeds, plant materials, and native plant cultivars for re-vegetation efforts, in the following order of preference:  1. Locally derived sources; 2. Regionally derived sources; 3. Native to the Mojave Desert ecoregion.  Only authorize use of non-native plant species when the following criteria are met:  a) Desired native species are not available; b) Exotic and naturalized species can be confined within the treatment area.

Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Seed mixes used for rehabilitation will reflect a diversity of plant types suitable to the soils, climate, and landform of the area being restored. Mixes will be designed to meet a range of purposes appropriate for the land involved including wildlife, watershed, soil retention, livestock, and fire ecology.	Include a high proportion of early colonizing (early successional) native annual and perennial species in seed mixes or plantings to quickly re-establish soil cover, minimize invasive species establishment, and facilitate the re-establishment of late successional species.		
No similar action.	Include native species in seed mixes or plantings that will function as “nurse” plants to facilitate the re-establishment of species (e.g., Joshua trees) that require shade during initial growth stages.		
No similar action.	To implement seeding restoration, authorize the use of non-invasive (e.g., aerial applications, hand scattering, surface distribution of encapsulated seeds, mulching) and minimally invasive seeding (e.g., small seed drills, hand raking) methods, as well as plug plants, containerized plants, and other plant materials.	To implement seeding restoration, authorize the use of non-invasive seeding methods (e.g., aerial applications, hand scattering, surface distribution of encapsulated seeds, mulching), as well as plug plants, containerized plants, and other plant materials.	Same as Alternative B.
No similar action.	To protect seeds from rodents, birds, and other grammivores, authorize the use of non-invasive (e.g., seed encapsulation, mulching) and minimally invasive (e.g., small seed drills, hand raking) seed protection methods.	To protect seeds from rodents, birds, and other grammivores, authorize the use of non-invasive seed protection methods (e.g., seed encapsulation, mulching).	Evaluate the use of invasive seed protection methods (e.g., harrowing, chaining) outside of designated critical habitats on a case-by-case basis.  Authorize the use of such methods only when scientific research demonstrates that the benefits would clearly outweigh the negative effects on listed species, habitats, and other resource values.
No similar action.	Authorize hand planting of plugs, other plant materials, and containerized plants for vegetation restoration and ES&R treatments.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, exhibits, demonstration treatment areas, websites) that inform visitors about vegetation/habitat restoration projects and ES&R actions.  Involve volunteers, school, youth and veterans groups, academic institutions, and partner organizations in restoration projects whenever feasible to increase public awareness and foster increased citizen stewardship of NCA lands and resources.		

Table 2-42 Fire and Fuels			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Research			
No similar action.	<p>Pursue opportunities to scientifically assess (i.e., through rigorous and statistically valid study design) the short and long-term effectiveness of seed/seedlings/cuttings by source in areas to be re-vegetated. Incorporate local ecotypes (locally collected and increased seed) into vegetation studies where plant materials are used for vegetation restoration.</p> <p>Pursue opportunities to collaborate with researchers and other federal and non-federal partners to assess the variability in the genetic diversity of plant species to assist in the development of species’ Seed Transfer Zones and inform the development of plant materials and seed purchase for large scale restoration and re-vegetation projects.</p> <p>Pursue opportunities for scientific studies of the insect and avian pollinators that occur in the NCA and their role in the persistence and/or recovery of native species.</p> <p>Pursue opportunities for scientific studies designed to better understand the role of gramnivores (e.g., ants, birds, rodents, other small mammals) and herbivores in the persistence and/or recovery of native species.</p> <p>Pursue opportunities for scientific studies designed to improve the success of re-vegetation techniques for late successional species in disturbed and fire-damaged vegetation communities.</p> <p>Pursue opportunities for scientific studies to develop native plant materials and native plant cultivars that can quickly re-establish in fire-damaged arid lands and prevent infestations of noxious weeds and non-native invasive species.</p> <p>Pursue opportunities for scientific studies to develop cost effective and ecologically sustainable biological methods to control or eradicate noxious weeds and invasive species.</p>		
Climate Change Monitoring			
No similar action.	<p>Monitor the timing, frequency, and intensity of fall precipitation events in the NCA, as these events can be used to predict high invasive annual grass production in the following spring that will fuel catastrophic wildfires during the summer months.</p> <p>Pursue opportunities for scientific studies to determine the carbon sequestration value of intact desert shrublands and the potential for restoration of degraded desert shrublands to be used to mitigate increasing atmospheric carbon dioxide levels.</p>		

Table 2-43 Noxious Weeds and Invasive Species

Table 2-43 Noxious Weeds and Invasive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Ecological integrity of the native vegetation communities is conserved, protected, and restored.		
Objectives			
In accordance with national and state policies, BLM will continue working with the Washington County Weed Supervisor through written agreement for the control of noxious weeds on and near public lands. In order to prevent the introduction and spread of noxious weed species, BLM will seek to develop partnerships with landowners, Washington County, state agencies, other federal land management agencies, and interested organizations. Such partnerships will formulate and analyze an integrated weed management approach to develop public awareness programs, establish weed management objectives and priorities, develop and apply common inventory techniques, implement approved treatments and control measures, and monitor and report results.	Infestations of noxious weeds and exotic invasive species are controlled and ultimately eradicated using IWM.  New infestations of noxious weeds and exotic invasive species are prevented through management actions and project design.  Ecologically sustainable and cost effective methods are employed for all IWM treatments.  Research is supported that increases the understanding of ecosystem processes, natural cycles (e.g., seasonal precipitation), and anthropogenic factors (e.g., recreation) that affect the establishment and proliferation of noxious weeds and invasive species, and alter the historic fire regime.		
Management Guidance Common to All Alternatives			
Employ weed prevention BMPs (Appendix F) as appropriate for surface-disturbing projects and activities.			
Require the use of certified weed-free hay or other feed for recreational pack stock.			
Require the use of certified weed-free mulch and seed for reclamation, restoration, and re-vegetation projects.			
Management Actions			
No similar action.	Complete a systematic inventory of noxious weeds on public lands in the NCA.  Develop and maintain a GIS database of all noxious weed and invasive species treatment projects conducted in the NCA.		

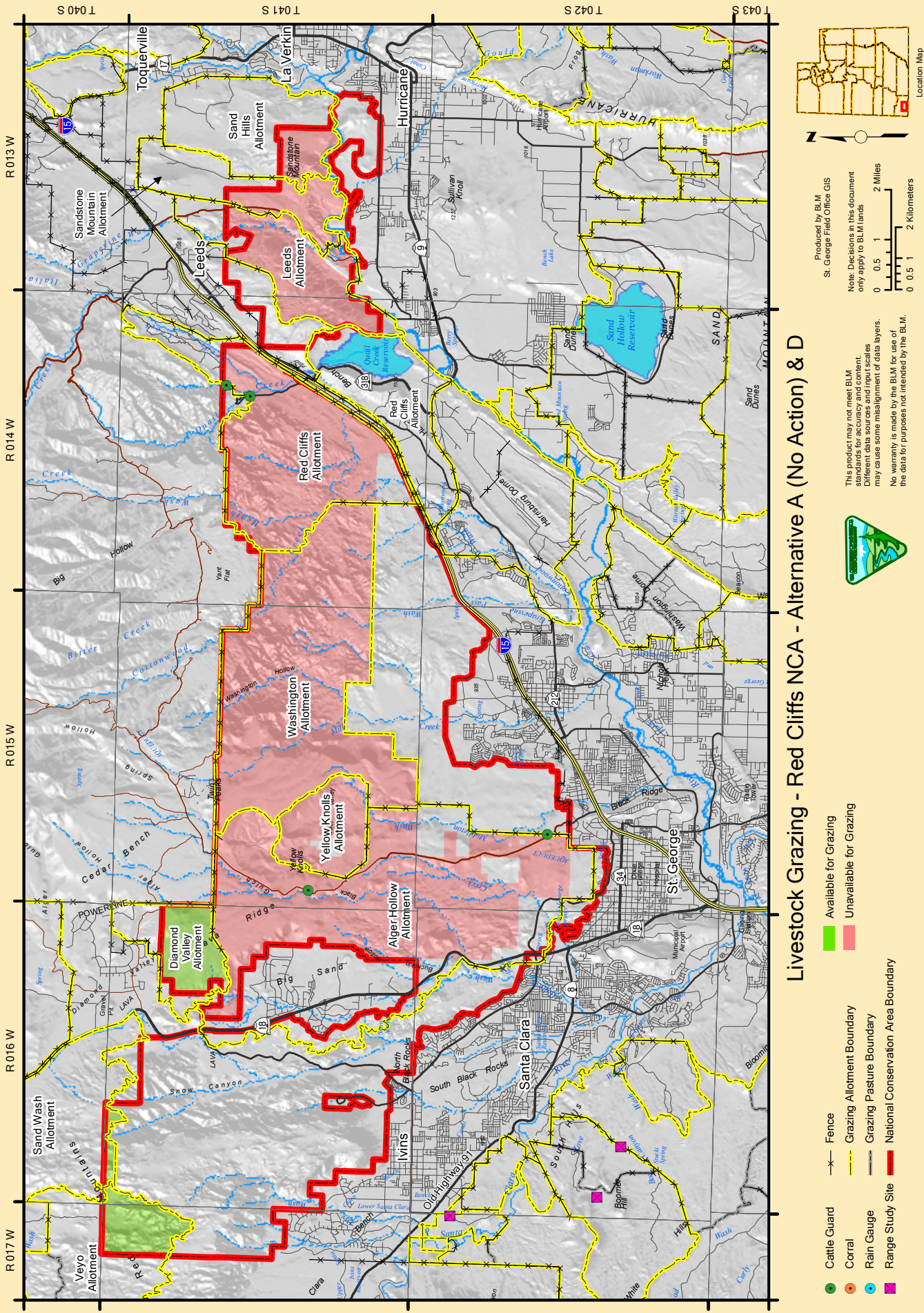


Table 2-43 Noxious Weeds and Invasive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Specific weed treatments will be determined by plant species, site characteristics, and management objectives. A combination of approaches may be employed to achieve the most environmentally sound results including mechanical, biological, and chemical techniques or changes in land use.	Authorize the use of biological controls, hand removal, herbicides, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale (see Table 2-8 for descriptions of each method).	Authorize the use of hand removal methods for weed treatments (see Table 2-8 for descriptions of this method).	Authorize the use of biological controls, flaming, hand removal, herbicide, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale (see Table 2-8 for descriptions of each method).
No similar action.	Conduct monitoring and treat all weed infestations for a minimum of 5 years or until target species is eradicated.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate public land use etiquette to prevent the introduction and spread of noxious weeds and non-native invasive species.  Involve volunteers, youth and veterans groups, and diverse partner organizations in the identification and mapping of noxious weed and exotic invasive species infestations and in weed treatment projects that employ hand removal and hand tool methods.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to develop ecologically sustainable and cost-effective biological controls for noxious weeds and non-native invasive species.  Pursue opportunities for scientific studies to test the effectiveness of herbicides approved for use on public lands in the reduction of exotic invasive annual grasses in Mojave Desert and transitional communities.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific studies that evaluate the effects of changing precipitation patterns and increased atmospheric carbon dioxide levels on the spread and dominance of non-native invasive annual grasses in Mojave Desert and transitional communities.		

Table 2-44 Vegetation Resource Uses: Livestock Grazing

Table 2-44 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Livestock grazing is managed in conformance with the mandates of OPLMA Section 1974 (e) 4 and in a manner that conserves, protects, and enhances the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the NCA.		
Objectives			
BLM objectives for grazing management on public lands throughout Washington County will be to:  a) Promote healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and safe and functional watersheds;  b) Restore and improve public rangelands to properly functioning condition, where needed;  c) Provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands;  d) Ensure that public land users and stakeholders have a meaningful voice in establishing policy and managing public rangelands.	Manage livestock grazing to ensure the long-term sustainability of Mojave Desert and Great Basin ecosystems and to promote the resilience and survival of native vegetation communities under predicted climate change scenarios.  Manage livestock grazing to achieve Utah Standards and Guides (Appendix D) for upland and riparian vegetation communities, by adjusting use levels, timing and intensity of grazing, and by developing improvement and restoration projects.		
Management Guidance Common to All Alternatives			
Conversions of types of livestock from cattle to sheep or other kind of livestock will not be authorized.			
Management Actions			
Within desert tortoise critical habitats, grazing permits will be permanently retired on the Alger Hollow, Red Cliffs, Yellow Knolls, and Washington allotments in accordance with Washington County HCP recommendations. In accordance with current biological opinions of the FWS, spring grazing after March 31 will not be authorized in those portions of Sandstone Mountain and Sand Hill allotments in Zone 4 of the Reserve to reduce	Continue to make public lands within the following allotments unavailable to livestock grazing over the life of the RMP:  a) Alger Hollow;  b) Red Cliffs;  c) Yellow Knolls;  d) Washington;  e) Leeds;  f) Sandstone Mountain;  g) Sand Hill.  Make public lands within the Diamond Valley allotment unavailable to livestock grazing over the life of the RMP (1,780 acres and 80 AUMs).  Continue to make public lands within the Sand Wash and Veyo allotments available for grazing over the life of the RMP.		

Table 2-44 Vegetation Resource Uses: Livestock Grazing			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
potential conflicts during the tortoise active season. Grazing permits in these allotments may also be retired where permittees choose to relinquish them.  “The BLM will authorize non-use for conservation and protection purposes for grazing privileges in the identified habitat areas. Grazing will not be permitted during the non-use period on acquired allotments until a definitive study of livestock/desert tortoise interrelationships has been completed, which demonstrates that livestock grazing is consistent with reserve management objectives.” (HCP 1995).  (Map 2-26)	(Map 2-27)		
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on increasing public understanding of the history of livestock grazing in the NCA.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies to determine changes in species composition and vigor of native vegetation communities in areas of the NCA where domestic livestock grazing was discontinued in the 1990s, when compared to historically collected baseline data.		





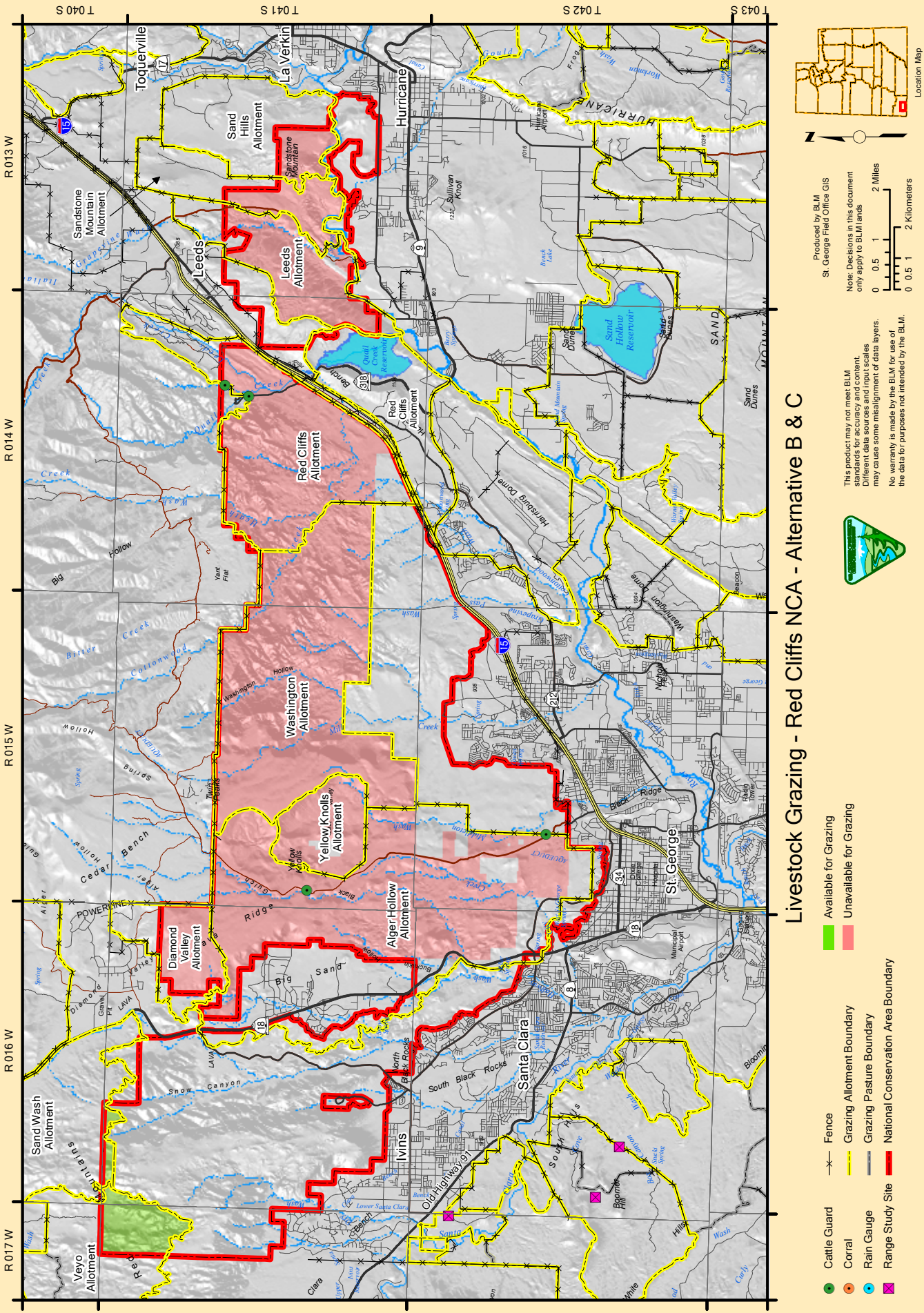


Table 2-45 Vegetation Resource Uses: Plant Materials

Table 2-45 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	A biologically diverse landscape is conserved, protected, and restored to support a variety of habitats and native plant and animal species.		
<b>Objectives</b>			
BLM’s objective for forestry management is to provide woodland products on a sustained yield basis to meet local needs where such use does not limit the accomplishment of goals for the management of other important resources. Where feasible, harvest of forest products will be encouraged in areas of proposed or existing vegetative treatments to lessen the need for additional treatment or land disturbance.	Manage harvesting and use of woodland products, native plants, and plant materials to conserve biological diversity and further restoration goals for native vegetation communities and species habitats.		
<b>Management Guidance Common to All Alternatives</b>			
Fees or permits would not be required for the collection of small quantities of pinyon pine seeds (pine nuts) for non-commercial personal use.			
<b>Management Actions</b>			
<i>Fuelwood and Post Harvesting for Commercial and Non-Commercial Purposes:</i>			
Closed to fuelwood harvest: Washington County HCP Reserve. (SGFO RMP Table 2-8)	Do not authorize commercial and non-commercial fuelwood or post harvesting in the NCA.		
<i>Christmas Tree Harvesting for Commercial and Non-Commercial Purposes:</i>			
Closed to fuelwood harvest: Washington County HCP Reserve. (SGFO RMP Table 2-8)	Do not authorize commercial or non-commercial Christmas tree harvesting in the NCA.		
<i>Campfire Materials:</i>			
On-site use of dead and down fuelwood for campfires will be allowed except where otherwise prohibited by planning decision or permit stipulations.  Wood gathering is prohibited in the Lowland Zone; in the Upland Zone wood gathering is restricted to dead and down wood only. For areas outside of official campgrounds, camp stoves are strongly encouraged. (Red Cliffs Desert Reserve Public Use Plan 2000 (PUP)).	Allow the on-site use of dead and down materials for campfires, except in riparian areas.  Dispersed camping is allowed in the Backcountry and Primitive Recreation Management Zones.	Do not allow on-site use of dead and down materials for campfires.  Dispersed camping is allowed in the Primitive Recreation Management Zone.	Same as Alternative B.

Table 2-45 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
The collection of dead and down materials for campfires is not authorized in the Red Cliffs Recreation Area; visitors must provide firewood for use in campfires in the campground and day use area.			
Native Seed Harvesting for Commercial and Non-Commercial Purposes:			
Closed to commercial and non-commercial seed harvests: Critical habitats for special status species, areas of critical environmental concern, and designated wilderness.	Do not authorize native seed harvesting for commercial or non-commercial purposes in the NCA.		
Native Desert Vegetation Harvesting for Commercial and Non-Commercial Purposes:			
Because demand will rapidly exhaust the available supply, desert vegetation sales will be limited to designated salvage areas only. These areas typically include lands under construction for ROWs or other projects undertaken or approved by BLM.	Do not authorize the commercial or non-commercial harvesting, removal, salvage, and/or sale of native desert vegetation (e.g., cacti, succulents, other native species) in the NCA.		
Exceptions will be made for... the collection of vegetative products for Native American ceremonial or religious purposes, excluding federally-listed species.	Authorize the individual collection of native plant materials (excluding all federally-listed native plant species) by Native Americans for religious, ceremonial, and traditional purposes.		
Native Seed, Plants, and Plant Materials Collection for Research, Conservation, and Restoration:			
Exceptions will be made for... specific authorization for the collection of vegetation for scientific purposes.	Authorize collection of native seeds, seedlings, plants, cuttings, biological soil crusts and species for scientific research through an NCA Scientific Research Permit and Utah BLM Specimen Collection Permit, where required.		
No similar action.	Authorize the collection of native seeds, seedlings, cuttings, biological soil crust communities and species for conservation and future use in restoration projects. Seed collection will follow the Seeds for Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.  Develop partnerships with appropriate BLM Seed Warehouses for storage and management of seed collections and with other federal and non-federal entities for propagation of seedlings and cuttings.		
No similar action.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and within adjacent areas of the north-eastern Mojave Desert in southwestern Utah.	Authorize hand method seed collection for scientific studies and for restoration projects to be completed within the NCA.	Authorize hand method seed collection for scientific research and for restoration projects on public lands within the NCA and adjacent areas within the northeast Mojave Desert of south-western Utah, Arizona, and Nevada.

Table 2-45 Vegetation Resource Uses: Plant Materials			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust materials for restoration projects on public lands within the NCA and within adjacent areas of the northeastern Mojave Desert in southwestern Utah.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust materials for restoration projects to be completed within the NCA.	Authorize the collection of native seedlings, plants, cuttings, and biological soil crust restoration projects on public lands within the NCA and adjacent areas within the northeast Mojave Desert of southwestern Utah, Arizona, and Nevada.
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) that focus on increasing public understanding of research related to the development of improved plant materials and restoration techniques for arid lands.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies designed to improve the success of re-vegetation techniques for late successional species in disturbed and fire damaged vegetation communities.  Pursue opportunities for scientific studies to develop native plant materials and native plant cultivars that can quickly re-establish in fire-damaged arid lands and prevent infestations of noxious weeds and non-native invasive species.		



Table 2-46 Special Status Plant Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA

Table 2-46 Special Status Plant Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Shivwits milkvetch ( <i>Astragalus ampullarioides</i> ) populations in the NCA are stable or increasing, helping to assist the recovery and delisting of this endemic Washington County native plant species.		
Objectives			
BLM will apply appropriate management to special status plant species located on public lands in Washington County.  Special status plant species include:  a) Threatened or endangered species listed or species proposed for such listing under the Endangered Species Act;  b) Candidate species;  c) State-listed sensitive species.  BLM’s objective will be to help recover listed species and manage candidate and sensitive species so that additional listings are not necessary. Management will focus on the development and implementation of recovery plans for listed species and conservation agreements and strategies for candidate and other sensitive species.	Implement management actions to conserve, protect, and restore habitat for the Shivwits milkvetch.		
Management Guidance Common to All Alternatives			
Implement the goals, objectives, and management recommendations identified in the approved <i>Recovery Plan for Astragalus holmgreniorum</i> (Holmgren milk-vetch) and <i>Astragalus ampullarioides</i> (Shivwits milk-vetch) (USFWS 2006).			
Management Actions			
No similar action.	Monitor identified populations of Shivwits milkvetch populations within the NCA in coordination with USFWS.  Conduct botanical inventories of areas within the NCA where appropriate soil types are present that comprise suitable Shivwits milkvetch habitat.  Use protective measures such as natural barriers, fencing, signing, and trail designation to protect populations of and habitat for Shivwits milkvetch.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, brochures, websites) that inform visitors about the endemic and at-risk native plants that grow in the NCA and appropriate public land etiquette to protect these species.		

Table 2-46 Special Status Plant Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Scientific Research</b>			
No similar action.	Pursue opportunities to complete detailed soil surveys in the NCA to assist in the identification of areas that could support populations of Shivwits milkvetch.  Pursue opportunities to collect data on the timing, frequency, and duration of precipitation events and how these influence persistence and expansion of Shivwits milkvetch populations.  Pursue opportunities for scientific research that focuses on the species of native bees or other pollinators that help to ensure reproduction within Shivwits milkvetch populations and gene flow between populations.		

Table 2-47 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA

Table 2-47 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Habitats for listed species are conserved, protected, and restored to support viable populations that no longer require listing protection under the ESA.  Habitats for species proposed for listing under the ESA are conserved, protected, and restored to support viable populations, precluding the need to list species that are candidates or proposed for listing under the protection of the ESA.		
Objectives			
BLM will manage public lands to meet the goals and objectives of recovery plans, conservation agreements and strategies, approved activity level plans, and the Washington County HCP Implementation Agreement related to the recovery of special status animals in Washington County. As part of its plan implementation, BLM will work with its partners to promote public education on species at risk, significance to the human and biological communities, and reasons for protective measures that will be applied to the lands involved. BLM’s objective will be to collaboratively manage habitat for federally-listed species so as to achieve recovery and delisting. Approved recovery plans will guide management decisions. Recovery plan actions already implemented will be evaluated for effectiveness in achieving desired effects and revised where studies show objectives have not been met. BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies.	Upland vegetation communities provide high quality forage or a high quality prey base, as well as cover, shade, and breeding areas that will sustain viable populations of biologically diverse terrestrial and aquatic species.  Riparian areas and natural water sources provide high quality habitat, thereby sustaining viable populations of biologically diverse terrestrial and aquatic species.  Habitat connectivity, migration routes, and movement corridors are conserved, protected, and restored to support species persistence, adaptation, and overall biodiversity under changing climate conditions.  Management of discretionary activities does not contribute to the need to list candidate or proposed species under the ESA.  Public awareness of special status species is enhanced through education, interpretation, and volunteer opportunities that further species conservation and habitat restoration.  Research is supported that increases the knowledge of threatened and endangered species that inhabit the NCA and the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		

Table 2-47 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.			
<b>Management Guidance Common to All Alternatives</b>			
Implement the goals, objectives, and management recommendations that apply to public lands from USFWS-approved Recovery Plans, Biological Opinions issued under Section 7 of the ESA. Evaluate the effectiveness of management actions through monitoring and scientific research studies.			
Continue active management programs to inventory, monitor, protect, and restore habitats for special status species, to control detrimental non-native species, and to re-establish extirpated populations, as necessary, to maintain the unique ecosystem biodiversity of the NCA.			
Apply BMPs and other management techniques designed to minimize impacts on critical habitats and listed species populations that may result from land uses and authorized activities.			
<b>Management Actions</b>			
<i>Population Management:</i>			
No similar action.	Authorize the reintroduction, translocation, and population augmentation of special status species populations into current or historic habitats in the NCA, in coordination with USFWS and UDWR, to assist recovery and delisting of threatened or endangered species and preclude the need to list other at-risk species.  Monitor the long term success of population management actions and use Adaptive Management Strategies to improve desired outcomes.		
In collaboration with affected state and federal agencies, predator control in either area may be allowed using techniques designed to control target species only. This will reduce the loss of hatchlings and juvenile tortoises to predators such as coyotes and ravens.	Collaborate with USFWS, UDWR, and appropriate USDA agencies on predator control, if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable populations of listed species. Require the development of target species-specific predator control plans supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		
<i>Habitat Management:</i>			
No similar action.	Suppress wildfires in special status species' habitats using tactics that minimize fire size and impacts on species' populations, native vegetation communities, and other ecosystem components, while ensuring that firefighter safety and private property are given highest priority.  Prioritize habitat restoration projects and post-fire ES&R treatments as follows: 1. Designated critical habitats for federally-listed threatened and endangered species; 2. Habitats for candidate and proposed species for listing under ESA.		
No similar action.	Do not authorize recreational activities or uses in areas where special status species habitats may be degraded by these authorizations.		
No similar action.	Only authorize new land uses in special status species habitats if reasonable alternative locations outside of these habitats do not exist and impacts to habitats can be avoided or appropriately mitigated.  Maintain habitat connectivity, migration routes, and movement corridors through project placement, design, and permit stipulations to support special status species persistence, adaptation, and overall biodiversity under changing climate conditions.		



Table 2-47 Special Status Wildlife Species-Including Threatened, Endangered, Candidate, and Species Proposed for Listing under ESA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Public Education and Interpretation			
As part of its plan implementation, BLM will work with its partners to promote public education on species at risk, significance to the human and biological communities, and reasons for protective measures that will be applied to the lands involved.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate land use etiquette and the need to protect populations and habitats for terrestrial and aquatic species that are listed or proposed for listing under the protection of the ESA.		
	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about terrestrial and aquatic special status species, their evolutionary adaptations to an arid landscape where surface water is limited, and the factors that have contributed to the need to list these species under the ESA.		
	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the rich biodiversity created by the convergence of the Mojave Desert, Great Basin, and Colorado Plateau ecosystems that can be experienced in the NCA.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to determine the habitat value of native vegetation communities of different successional stages for diverse wildlife species to improve habitat protection and restoration project planning for special status species.		

Table 2-48 Special Status Bird Species: Southwestern Willow Flycatcher, Yellow Billed Cuckoo, and Other Riparian-Dependent Special Status Bird Species

Table 2-48 Special Status Bird Species: Southwestern Willow Flycatcher, Yellow Billed Cuckoo, and Other Riparian-Dependent Special Status Bird Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Southwestern willow flycatcher and yellow-billed cuckoo populations that utilize habitats in the NCA would be stable or increasing, helping to meet recovery and delisting goals for each species.		
Objectives			
BLM will protect potential flycatcher habitat through implementation of land use prescriptions for riparian resources described earlier in this Plan. Among other things, the prescriptions will allow no surface occupancy for fluid mineral leasing, limit off-road travel, discourage ROW construction, and prohibit sales of fuelwood and mineral materials. The prescriptions also call for retention and acquisition of prospective habitat.	Riparian habitats along Leeds Creek, the Virgin River, and elsewhere in the NCA would include the vegetative species diversity, density, and canopy cover required to provide suitable habitat for southwestern willow flycatchers.  Cottonwood gallery forests along Quail Creek would provide suitable habitat for yellow-billed cuckoos.  Riparian areas would be in proper functioning condition and provide adequate foraging, roosting, and nesting sites for riparian-obligate special status avian species.  Research is supported that increases baseline data related to riparian-obligate avian species that utilize the NCA.  Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		
Management Guidance Common to All Alternatives			
Management of riparian habitat would be consistent with the <i>Final Recovery Plan: Southwestern Willow Flycatcher (Empidonax traillii extimus)</i> (USFWS 2002) and Biological Opinions issued by USFWS.			
Management Actions			
Where known active nest sites are located on public lands, BLM will implement seasonal closures for the period of April 1 to August 30 within 0.5 mile of nests for discretionary permits authorizing construction or other disruptive activity.  In conjunction with affected partners and landowners, BLM will help identify desired plant communities needed to support viable flycatcher habitat. Where consistent with USFWS consultations, BLM will work with its partners in reestablishing desirable plant species, including willow and cottonwood, for long-term habitat enhancement and removal of undesired species in selected areas.	Maintain a database of observations of southwestern willow flycatchers and yellow-billed cuckoos.  Develop maps of potential habitats for southwestern willow flycatcher and yellow-billed cuckoo that include location, size, shape, spacing, and condition of habitat areas.  Manage potential habitat for southwestern willow flycatcher and yellow-billed cuckoos to allow natural regeneration into suitable habitat as rapidly as natural conditions allow.  Manage suitable habitat for southwestern willow flycatcher and yellow-billed cuckoos to conserve and protect its suitability for nesting, foraging, and occupancy.  Monitor changes in the relative abundance, health, reproductive success, and distribution of populations, in partnership with USFWS and UDWR.  Authorize the translocation and population augmentation of southwestern willow flycatcher and yellow-billed cuckoos in consultation with USFWS and UDWR.		

Table 2-48 Special Status Bird Species: Southwestern Willow Flycatcher, Yellow Billed Cuckoo, and Other Riparian-Dependent Special Status Bird Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about the riparian areas and the diverse avian species that depend upon this habitat.		
Scientific Research			
No similar action.	Develop new volunteer opportunities for partners, youth groups, and citizen scientists to assist with collecting observations of southwestern willow flycatcher, yellow-billed cuckoo, and other riparian-obligate avian species in the NCA along Quail Creek, Leeds Creeks, and the Virgin River.		

Table 2-49 Special Status Bird Species: California Condor

Table 2-49 Special Status Bird Species: California Condor	
Alternative A (No Action)	Alternative B Alternative C Alternative D
<b>Goal</b>	
	California condor populations that may utilize habitats in the NCA would be stable or increasing, helping to meet recovery and delisting goals for this species.
<b>Objectives</b>	
No similar action.	Native vegetation communities and riparian areas sustain potential roosting sites and a high quality prey base for California condors. Environmental hazards that may affect California condors are reduced or eliminated.
<b>Management Guidance Common to All Alternatives</b>	
Management of habitat would be consistent with the <i>Recovery Plan for the California Condor</i> (USFWS 1996) and Biological Opinions issued by USFWS.	
<b>Management Actions</b>	
No similar action.	Authorize the reintroduction, translocation, and supplemental releases of California condors into historic habitats in coordination with USFWS.  Maintain a database of observations of California condors and their prey, should they be observed using the NCA.  Coordinate with partners (e.g., UDWR, National Audubon Society, National Wildlife Federation) to promote the use of non-lead ammunition in the NCA.
<b>Public Education and Interpretation</b>	
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about California condors and the captive breeding and release programs ongoing on public lands on the Arizona Strip.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform hunters about the need to use non-lead ammunition to minimize impacts on California condors and other predators and scavengers.  Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about the need to pack out food wastes and litter that may cause choking and death when consumed by condors.
<b>Scientific Research</b>	
No similar action.	Develop new volunteer opportunities for partners, youth groups, and citizen scientists to assist with collecting observations of California condors in the NCA.
<b>Climate Change Monitoring</b>	
No similar action.	Pursue opportunities for research that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence the prey base of condors under predicted climate change scenarios.



Table 2-50 Special Status Reptile Species: Desert Tortoise

Table 2-50 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Desert tortoise populations in the NCA have made measurable progress toward meeting the recovery goals, objectives, and identified criteria for viable populations established by <i>Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 1994) and the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).		
<b>Objectives</b>			
BLM will work collaborative-ly with local, state, and fed-eral partners to accomplish the goals and the objectives of the Washington County HCP and Red Cliffs Desert Reserve. Major goals include the preservation and protec-tion of the desert tortoise and its habitat so as to achieve full recovery of the tortoise as well as their listed or sensi-tive species found within the Upper Virgin River Recovery Unit.	Land uses and authorized activities are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover), reproductive, and home range requirements of viable desert tortoise populations.		
	Ecologically intact core areas of designated critical habitat are conserved and protected from fragmentation and loss of native vegetation communities, through appropriate land use al-locations and management actions across BLM programs.		
	Ecological integrity of damage native vegetation communities is restored through appropri-ate re-vegetation methods and the control and eradication of noxious weeds and non-native invasive species.		
	Land uses and authorized activities are managed so that habitats provide ecological diversity and connectivity to create genetic resilience for desert tortoise populations under changing climatic conditions.		
	Research is supported that increases the knowledge of Mojave desert tortoise life histories and population dynamics in the NCA.		
	Research is supported that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence predicted climate change scenarios.		
<b>Management Guidance Common to All Alternatives</b>			
Implement the goals, objectives, and management recommendations identified in the Revised Recovery Plan for the Mojave Desert Tortoise (USFWS 2011), as well as the terms and conditions from relevant Biological Opinions issued by USFWS to assist recovery and delisting of the desert tortoise in the Upper Virgin River Recovery Unit. Evaluate the effectiveness of man-agement actions through monitoring and scientific research studies.			
Install tortoise barrier fencing along heavily traveled public use roadways in the NCA to minimize tortoise injuries and mor-talities caused by motorized vehicles.			
Coordinate with Washington County to post speed limits on heavily traveled public use roads where tortoise barrier fencing has not been installed to minimize tortoise injuries and mortalities caused by motorized vehicles.			
<b>Management Actions</b>			
<i>Population Management:</i>			
In collaboration with affected state and federal agencies, predator control in either area may be allowed using techniques designed to control target species only. This will reduce the loss of hatch-lings and juvenile tortoises to predators such as coyotes and ravens.	Authorize the translocation and population augmentation of desert tortoises in consultation with USFWS and UDWR.		
	Monitor changes in the relative abundance, health, reproductive success, and distribution of tortoise populations, in partnership with USFWS and UDWR.		
	Collaborate with USFWS, UDWR, and appropriate USDA agencies on predator control, if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable desert tortoise popu-lations. Require the development of target species-specific predator control plans supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		

Table 2-50 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Habitat Conservation, Protection, and Restoration:			
No similar action.	Prioritize the acquisition of non-federal lands or interests in critical tortoise habitat within the NCA boundaries from willing land owners through purchase, exchange, or donation. Whenever possible, acquire both surface and subsurface rights to avoid the creation of split estates.		
	Acquire conservation easements when such interest would further the goals of recovery and delisting of the desert tortoise or other at-risk species.		
	Prioritize conservation and protection of critical habitat through firebreaks, appropriate wild-fire suppression responses, and control or eradication of noxious weeds and invasive species.		
	Establish monitoring plots and conduct long-term monitoring using desired plant species frequency, density, and distribution data to evaluate the effectiveness of the vegetation restoration projects.		
	Require reclamation for activities that result in the loss or degradation of tortoise habitat. Good quality habitat would be restored to as close to pre-disturbance conditions as practicable. Damaged habitats would be improved to good quality through restoration, wherever practicable. Additional mitigation measures may be included in decision documents to offset the loss of quality and quantity of tortoise habitat.		
Authorized actions that may result in adverse effects (“incidental take”) of desert tortoises would require implementation of project stipulations including personnel education programs, pre-construction clearances, operational restrictions, and procedures for moving tortoise out of harm’s way.			
Public Education and Interpretation			
BLM will also work with state and local agencies, school districts, and interested citizen groups to develop educational programs to increase public awareness of habitat requirements, desert ecosystems, reasons for protective management, and other factors related to species recovery.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about Mojave Desert species, their evolutionary adaptations to an arid landscape where surface water is limited, and the factors that have contributed to the need to list these species under the ESA.		
	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about appropriate land use etiquette and the need to protect populations and habitats for desert tortoises and other Mojave Desert wildlife. Encourage public land users to pack out food scraps and litter that will attract predators that prey on tortoises, particularly juveniles.		
	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the rich biodiversity of the NCA created by the convergence of the Mojave Desert, Great Basin, and Colorado Plateau ecosystems.		
In collaboration with the UDWR and other appropriate law enforcement agencies, BLM will implement public education and enforcement actions needed to accomplish the objectives of the Reserve. BLM will also work with its HCP partners in locating, designing, and operating a desert wildlife education center to foster increased awareness of the important desert ecosystems in the Reserve and throughout Washington County.			

Table 2-50 Special Status Reptile Species: Desert Tortoise			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Research			
BLM will collaborate with the UDWR, the USFWS, and other interested parties to monitor the status of desert tortoises and to conduct studies needed to accomplish HCP objectives. Such studies may lead to adjustments in Reserve management so as to promote recovery of the tortoise or any other listed or sensitive species in the Reserve.	Pursue opportunities for scientific studies to determine the level and effects of predation on desert tortoise populations in the NCA.		
	Pursue opportunities for scientific studies to determine the effects of intensive non-motorized recreation on desert tortoise populations in the NCA.		
	Pursue opportunities for scientific studies to determine the relative abundance of desert tortoise populations in the NCA.		
	Pursue opportunities for scientific studies to determine age classes, gender ratios, and the health of desert tortoise populations in the NCA.		
	Pursue opportunities for scientific studies to determine changes in species composition and vigor of native vegetation communities in areas of the NCA where domestic livestock grazing was discontinued in the 1990s, when compared to historically collected baseline data.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for scientific studies to determine the effects of predicted higher winter temperatures on desert tortoise hibernation patterns, using observed changes as an indicator to monitor climate change.		

Table 2-51 Special Status Native Fish Species: Woundfin Minnow and Virgin River Chub

Table 2-51 Special Status Native Fish Species: Woundfin Minnow and Virgin River Chub			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Woundfin minnow ( <i>Plagopterus argentissimus</i> ) and Virgin River chub ( <i>Gila seminuda</i> ) populations that utilize the Virgin River through the NCA would be stable or increasing, helping to assist the recovery and delisting of these species across their range.		
<b>Objectives</b>			
Management of public land habitat for listed and sensitive fish species in the Virgin River and associated tributaries will be guided by the 1995 Virgin River Fishes Recovery Plan and the 1995 Virgin Spinedace Conservation Agreement and Strategy. Implementation of the plan and the strategy has been underway since their respective approvals and will continue in collaboration with the UDWR, the USFWS, the Washington County Water Conservancy District, and other interested local, state, and federal entities. The overriding goal is to achieve recovery of the species to allow downlisting and eventual delisting of the two endangered fish and to eliminate the need for listing of the spinedace. Objectives include eliminating significant threats to the fish and their habitats and to stabilize and enhance specific reaches of occupied and historic habitat.	Suitable aquatic habitats for woundfin minnow and Virgin River chub in the NCA would be managed to support viable populations.  Research is supported that increases baseline data related to Virgin River native fish in the NCA.  Research is encouraged that informs the management of aquatic habitats for at-risk species under predicted climate change scenarios.		
<b>Management Guidance Common to All Alternatives</b>			
Management actions will be guided by the <i>Virgin River Fishes Recovery Plan</i> (USFWS 1995), <i>Virgin River Resource Management Plan and Recovery Program</i> (USFWS 2000), and <i>Fish and Wildlife 2000: Special Status Fish Habitat Management</i> (BLM 1991).			
<b>Management Actions</b>			
BLM will provide appropriate support to active partners in the Virgin River Fishes Recovery Team in implementing the following measures called for in the plans:  a) Monitor fish populations and habitat conditions;  b) Eradicate exotic fish species in selected reaches;	Assist with monitoring efforts for woundfin minnow and Virgin River chub in cooperation with USFWS, UDWR, and the partners of the Virgin River Program.  Authorize the reintroduction, translocation, and population augmentation of woundfin minnow and Virgin River chub into suitable habitats in the NCA.  Monitor land uses and authorized activities that have the potential to degrade water quality, damage riparian vegetation, and collapse stream banks that provide shade and cover for aquatic species.  Restrict, modify, or eliminate land uses and authorized activities that are shown to degrade aquatic habitats that support native Virgin River fish species.		



Table 2-51 Special Status Native Fish Species: Woundfin Minnow and Virgin River Chub			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
c) Reintroduce desired native fish species; d) Restore degraded habitats; e) Implement controls over conflicting land use; f) Reestablish instream population maintenance flows through agreements and other appropriate mechanisms.	Prioritize the acquisition of non-federal inholdings within the NCA that would benefit the conservation, protection, and restoration of the Virgin River and its tributaries.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that inform visitors about the Virgin River, its tributaries, and the unique native fish and aquatic species that evolved in this system.  Involve partners and volunteers in clean-up and restoration projects that improve aquatic habitat conditions along the Virgin River through the NCA.		
Scientific Research			
No similar action.	Pursue opportunities to increase baseline data and the general understanding of population dynamics and habitat needs of native Virgin River fish through scientific research.		

Table 2-52 BLM Sensitive Species

Table 2-52 BLM Sensitive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Habitats for aquatic and terrestrial BLM sensitive species support viable, self-sustaining populations that do not require listing under the ESA.		
Objectives			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Land uses and authorized activities on public lands are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover), reproductive, and home range requirements of sensitive species populations in the NCA.  Ecologically intact core areas of sensitive species habitats are conserved and protected from fragmentation and loss of native vegetation communities, through appropriate management actions across all BLM programs.  Ecological integrity of damaged native vegetation communities is restored, through appropriate re-vegetation methods and control and eradication of noxious weeds and invasive non-native species.  Land uses and authorized activities on public lands are managed so that habitats provide ecological diversity and connectivity to create resiliency for sensitive species populations under changing climate conditions.  Research is supported that increases the amount of baseline data related to sensitive species that occupy and/or utilize the NCA.  Research is encouraged that informs the management of habitats for at-risk species under predicted climate change scenarios.		
Management Guidance Common to All Alternatives			
Implement the goals, objectives, and management recommendations that apply to public lands from Executive Orders, Conservation Agreements and Strategies, and BLM policies. Evaluate the effectiveness of management actions through monitoring and scientific research studies.  Continue active management programs to inventory, monitor, protect, and restore habitats for sensitive species, control detrimental non-native species, and re-establish extirpated populations, as necessary, to maintain biodiversity.  Apply BMPs and other management techniques designed to minimize impacts on critical habitats as a result of land uses, authorized activities, and habitat restoration actions.			
Management Actions			
Population Management:			
No similar action.	Authorize the reintroduction, translocation, and population augmentation of native sensitive species into historical and current habitats, in consultation with UDWR, to restore populations and enhance or maintain current populations, distributions, and genetic diversity.  Monitor the long term success of the population actions and use Adaptive Management Strategies to improve desired outcomes.  Monitor changes in relative abundance and distribution of sensitive species populations in the NCA, in partnership with UDWR.  Collaborate with UDWR and appropriate USDA agencies on predator control, if other management actions have not been successful in reducing documented predation levels that have been shown to be measurably impacting the recovery of viable populations of sensitive species. Require the development of target species-specific predator control plans, supported by NEPA analyses that identify the purpose of and need for action, designate specific goals to be met, and evaluate the least invasive and most ecologically sensitive methods to accomplish those goals.		

Table 2-52 BLM Sensitive Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Habitat Conservation, Protection, and Restoration:</i>			
No similar action.	Only authorize new land uses in sensitive species' habitats if reasonable alternative locations outside of these habitats do not exist and impacts to species populations and habitats can be mitigated.  Maintain habitat connectivity, migration routes, and movement corridors through project placement, design, and permit stipulations to support sensitive species persistence, adaptation, and overall biodiversity under changing climate conditions.		
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about sensitive species, their evolutionary adaptations, and the factors that have contributed to declining populations.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies to determine the relative abundance of sensitive species populations in the NCA.  Pursue opportunities for scientific studies to determine age classes, gender ratios, and the health of sensitive species populations in the NCA.  Pursue opportunities for scientific studies to determine the level and effects of predation on sensitive species populations in the NCA.		
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities to establish a long-term monitoring program to detect changes in seasonal migration patterns (arrival and departure dates) of selected migratory bird species as potential indicators of climate change.		

Table 2-53 BLM Sensitive Native Fish Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Aquatic habitats in Leeds Creek and the Virgin River support stable or increasing populations of BLM sensitive fish species including Virgin spinedace, desert sucker, and flannelmouth sucker ( <i>Catostomus latipinnis</i> ), helping to ensure that none of these species requires listing under the ESA.		
<b>Objectives</b>			
Management of public land habitat for listed and sensitive fish species in the Virgin River and associated tributaries will be guided by the 1995 Virgin River Fishes Recovery Plan and the 1995 Virgin Spinedace Conservation Agreement and Strategy. Implementation of the plan and the strategy has been underway since their respective approvals and will continue in collaboration with the UDWR, the USFWS, the Washington County Water Conservancy District, and other interested local, state, and federal entities. The overriding goal is to achieve recovery of the species to allow downlisting and eventual delisting of the two endangered fish and to eliminate the need for listing of the spinedace. Objectives include eliminating significant threats to the fish and their habitats and to stabilize and enhance specific reaches of occupied and historic habitat.	Aquatic habitat in the Virgin River on public lands provides interspersed pools, runs, and riffles of clear, cool water of sufficient quality and quantity to support viable populations of Virgin spinedace, desert sucker, and flannelmouth sucker.  Non-native invasive fish species are eradicated in the reach of the Virgin River through the NCA.  Research is supported that increases baseline data related to Virgin River native fish in the NCA.  Research is encouraged that informs the management of aquatic habitats for at-risk species under predicted climate change scenarios.		
<b>Management Guidance Common to All Alternatives</b>			
Management actions will be guided by the <i>Virgin River Fishes Recovery Plan</i> (USFWS 1995), <i>Virgin River Resource Management Plan and Recovery Program</i> (USFWS 2000) and <i>Fish and Wildlife 2000: Special Status Fish Habitat Management</i> (BLM 1991).			
<b>Management Actions</b>			
BLM will provide appropriate support to active partners in the Virgin River Fishes Recovery Team in implementing the following measures called for in the plans:  a) Monitor fish populations and habitat conditions;	Assist with monitoring efforts for Virgin spinedace, desert sucker, and flannelmouth sucker populations in cooperation with UDWR and the partners of the Virgin River Recovery Program.  Authorize the reintroduction, translocation, and population augmentation of Virgin spinedace, desert sucker, and flannelmouth sucker into suitable habitats in the NCA.  Assist with eradication of non-native invasive fish species in cooperation with UDWR and the partners of the Virgin River Recovery Program.		



Table 2-53 BLM Sensitive Native Fish Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
b) Eradicate exotic fish species in selected reaches; c) Reintroduce desired native fish species; d) Restore degraded habitats; e) Implement controls over conflicting land use; f) Reestablish instream population maintenance flows through agreements and other appropriate mechanisms.	Pursue acquisition of non-federal lands within the NCA that would benefit the conservation, protection, and restoration of aquatic habitats.  Monitor land uses and authorized activities along the Virgin River in the NCA that have the potential to degrade water quality, damage riparian vegetation, and collapse stream banks that provide shade and cover for aquatic species.  Restrict, modify, or eliminate any land uses and authorized activities that are shown to degrade aquatic habitat in the Virgin River or its tributaries, Quail and Leeds Creeks.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues both off-site and along Leeds Creek and the Virgin River within the NCA (e.g., trailhead kiosks) that educate visitors about Virgin spinedace, desert sucker, and flannelmouth sucker, their evolutionary adaptations, and the factors that are contributing to declining populations.		
Scientific Research			
No similar action.	Pursue opportunities to increase the amount of baseline data and scientific knowledge related to the specific habitat requirements of native fish of the Virgin River system.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to collect data on changing precipitation patterns in the Virgin River watershed that have the potential to impact aquatic habitats under predicted climate change scenarios.		

Table 2-54 BLM Sensitive Raptor Species

Table 2-54 BLM Sensitive Raptor Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Diverse raptor populations that utilize the NCA are viable or increasing and do not require listing under the ESA. BLM sensitive raptor species present in the NCA include: bald eagle, burrowing owl, ferruginous hawk, northern goshawk, and short eared owl.		
Objectives			
BLM will continue to implement recovery plans for the federally-listed species and collaborate with the UDWR and interested conservation groups in conducting inventories, protecting nest sites and aeries, and preserving associated habitats.	Land uses and authorized activities on public lands are managed to conserve, protect, and restore habitats to meet the nutritional, metabolic (shade/cover/perching), reproductive, and home range requirements of diverse species of raptors.  Habitats for raptors provide high quality roosting and nesting sites and diverse prey base, thereby sustaining viable populations of these species.  Environmental hazards that could impact raptors are minimized.  Research is supported that increases the amount of baseline data related to all species of raptors and the prey base that they utilize in the NCA.		
Management Guidance Common to All Alternatives			
Monitor potential habitat for raptors and maintain a database of raptor observations.			
Management Actions			
No similar action.	Authorize the reintroduction, transplantation, and population augmentation of bald eagles, ferruginous hawks, northern goshawks, and short eared owls where doing so would not be detrimental to the viability of other native species.  Authorize the population augmentation of burrowing owls and the installation of artificial nest burrows where doing so would not be detrimental to the viability of other native species.  Maintain a geospatially linked database of observations of diverse raptors and their prey.  Coordinate with partners (e.g., UDWR, National Audubon Society, National Wildlife Federation) to promote the use of non-lead ammunition in the NCA.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that educate the public about raptors and their role in the ecosystems of the NCA.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform hunters about the need to use non-lead ammunition to minimize impacts on raptors.		
Scientific Research			
Biological surveys will be conducted to identify sensitive species occurrence, nesting sites (for the northern goshawk and ferruginous hawk), and special habitat requirements. Data gained from the surveys will be used by BLM, UDWR, and other affected partners to develop and implement recommendations for habitat management needed to maintain healthy populations of the species involved and reduce the need for additional listings.	Pursue opportunities to collect baseline observational data on raptor species that occur in the NCA and develop location maps of nesting and roosting sites, as well as information on the prey base for each species.  Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for raptors, carnivores, and other predatory species, including rodents, desert cottontail rabbits, and jackrabbits.  Develop new volunteer opportunities for partners, special interest groups, birding enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for eagles, hawks, falcons, and owls that utilize the NCA.		

Table 2-54 BLM Sensitive Raptor Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Climate Change Monitoring</b>			
No similar action.	Pursue opportunities for monitoring and research that increases the understanding of ecosystem processes, natural cycles, and anthropogenic factors that may influence the prey base of raptors under predicted climate change scenarios.		

Table 2-55 Migratory Birds and Birds of Conservation Concern

Table 2-55 Migratory Birds and Birds of Conservation Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Migratory bird species and Birds of Conservation Concern that utilize the NCA do not require listing under the protection of the ESA (see Appendix G for species list).		
<b>Objectives</b>			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Biologically diverse habitats that provide essential breeding, nesting and roosting sites, space, cover, and food for migratory birds would be conserved, protected, and restored.  Research is supported that increases the amount of baseline data related to all species of migratory birds and their diverse habitat requirements.  Research is encouraged that identifies changes in migration patterns as a potential indicator of climate change.		
<b>Management Guidance Common to All Alternatives</b>			
Only authorize actions that would adversely impact nesting migratory birds if they are subject to seasonal restrictions or mitigation requirements.			
<b>Management Actions</b>			
No similar action.	Minimize disturbances or adverse effects on breeding bird populations that might result from authorized activities through seasonal restrictions, special permit stipulations, or other appropriate mitigation measures.		
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and at on-site venues along Quail and Leeds Creeks and the Virgin River that educate the public about migratory bird species, the causes for declining populations, and the need to protect riparian habitats and seasonal migration routes.  Promote opportunities for viewing and photographing diverse species of migratory birds through interpretive materials, recreation trails, and special outreach activities such as guided birding hikes along Quail and Leeds Creeks and the Virgin River.  In partnership with the National Audubon Society and others, recruit and train youth groups, citizen stewards, and other volunteers to participate in annual migratory bird counts in Quail and Leeds Creeks, the Virgin River, and elsewhere in the NCA.		
<b>Scientific Research</b>			
No similar action.	Pursue opportunities to conduct field inventories of riparian areas along Quail and Leeds Creeks and the Virgin River to identify avian species that utilize the NCA.  Pursue opportunities to collect baseline observational data on migratory birds and other avian species and develop location maps of occupied habitats and nesting sites.  Pursue opportunities to conduct systematic inventories of migratory birds that utilize the NCA and evaluate the condition of the preferred habitats for each species.  Develop new volunteer opportunities for partners, special interest groups, birding enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for migratory birds, Birds of Conservation Concern and Partners in Flight species.		



Table 2-55 Migratory Birds and Birds of Conservation Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Climate Change Monitoring</b>			
No similar action.	Pursue research opportunities that focus on changes in the seasonal migration patterns of selected migratory bird species as potential indicators of climate change.		

Table 2-56 BLM Sensitive Mammal Species

Table 2-56 BLM Sensitive Mammal Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Habitats for BLM sensitive mammal species support viable populations that do not require listing under the ESA. Sensitive mammals present in the NCA include: kit fox, Allen’s big-eared bat, big free-tailed bat, fringed myotis, spotted bat, Townsend’s big-eared bat, and western red bat.		
Objectives			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Habitats for the kit fox provide for a diverse and healthy prey base, as well as sufficient reproductive and home range requirements.  Habitats for sensitive bat species provide high quality maternity and roosting sites, winter hibernacula, and a diverse prey base, thereby sustaining viable populations of these species.  Caves, karst resources, and abandoned mines allow for unimpeded ingress and egress by diverse bat species.  Research is supported that increases the baseline data related to sensitive mammal species and the habitats that they utilize in the NCA.		
Management Guidance Common to All Alternatives			
As needed, implement National White Nose Syndrome Decontamination Protocol and BLM IM 2010-18 in the management of habitats that support sensitive species bat populations.			
Management Actions			
No similar action.	Authorize the reintroduction, transplantation, and population augmentation of sensitive mammal species where doing so would not be detrimental to the viability of other native species.  Do not authorize the use of herbicides, pesticides, or poisons that are injurious or toxic to sensitive mammal species, will damage native vegetation communities, or will reduce the quality and quantity of species that comprise their prey base.  Manage caves, karst resources, and abandoned mines to protect bat habitat (e.g., foraging, roosting, maternity sites, winter hibernacula) and reduce the potential spread of contagious diseases, such as White Nose syndrome, in bat populations.  Require the installation of bat-friendly gates in caves and karst features that require access restrictions or closure.  Where appropriate, limit abandoned mine closure methods to the installation of bat-friendly gates for those abandoned mines that provide habitat (e.g., foraging, roosting, maternity sites, winter hibernacula) for bats.  Install bat friendly escape ramps in troughs or other artificial water sources.  Do not authorize activities that have the potential to disturb bats within a 0.25 mile radius of maternity roost sites and winter hibernacula, including all entrances to caves, karst features, and abandoned mines.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues both off-site and on to inform visitors about the many sensitive mammal species found in the NCA, as well as their diverse habitats and prey.		

Table 2-56 BLM Sensitive Mammal Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Scientific Research</b>			
No similar action.	Pursue opportunities for scientific studies to collect population and life history data on the kit fox in the NCA.		
	Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for the kit fox.		
	Pursue opportunities to conduct field inventories of caves, abandoned mines, cliffs, and other suitable habitats to identify all of the bat species that utilize the NCA.		
	Pursue opportunities to collect baseline observational data on bat species and develop location maps of occupied habitats, hibernacula, and maternity roost sites.		
	Develop new volunteer opportunities for partners, special interest groups, cave enthusiasts, and citizen scientists to assist with observational data collection and habitat mapping for sensitive mammal species.		

Table 2-57 BLM Sensitive Reptile and Amphibian Species

Table 2-57 BLM Sensitive Reptile and Amphibian Species			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Reptiles and amphibians identified as BLM sensitive species do not require listing under the ESA. Sensitive reptiles and amphibians present in the NCA include the common chuckwalla, Gila monster, sidewinder, western banded gecko, western thread-snake, zebra-tailed lizard, and Arizona toad.		
Objectives			
BLM will also collaborate with appropriate local, state, and federal agencies in the management of habitat for nonlisted special status animal species with the objective of eliminating the need for additional listings. Management actions will be guided by conservation agreements and strategies. Special attention will be given to those animals listed as “sensitive” under the Utah Sensitive Species List maintained by the UDWR.	Introduced populations would increase to the point of being viable, self-sustaining populations of native endemic reptile and amphibian species.  Biologically suitable habitats would be conserved and protected.  Research is supported that increases the baseline data related to reptiles and amphibians in the NCA.  Research is encouraged that informs the management of reptile and amphibian habitats under predicted climate change scenarios.		
Management Actions			
No similar action.	Authorize the reintroduction, transplantation, and population augmentation of Arizona toad, northern leopard frog, lowland leopard frogs, and relict leopard frogs to suitable habitat locations, where doing so would not be detrimental to the viability of other native species.  Authorize the reintroduction, transplantation, and population augmentation of sensitive reptile species, where doing so would not be detrimental to the viability of other native species.  Do not authorize the use of herbicides, pesticides, or poisons that are injurious or toxic to sensitive reptile or amphibian species, will damage native vegetation communities, or will reduce the quality and quantity of species that comprise their prey base.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate the public about reptiles and amphibians in the ecosystems of the NCA.  Provide educational materials through various media and venues both off-site and along Leeds Creek and the Virgin River to inform visitors about the diverse species that occupy these habitats.		
Scientific Research			
No similar action.	Pursue opportunities to conduct field inventories to identify amphibians and reptiles that are found in springs/seeps, and along Quail and Leeds Creeks and the Virgin River through the NCA.  Pursue opportunities to increase the amount of baseline data and scientific knowledge related to the life histories, population trends, habitat requirements, and threats to amphibians and reptiles in the NCA to inform the management of aquatic habitats.		



Table 2-58 Other Fish and Wildlife Habitat Management

Table 2-58 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Aquatic and terrestrial habitats support viable populations of diverse native wildlife species and provide for biological diversity, ecological resilience, and species persistence under predicted climate change scenarios.		
<b>Objectives</b>			
BLM’s overall objective for fish and wildlife habitat management will be to maintain habitats in properly functioning conditions to support natural wildlife diversity, reproductive capability, and appropriate human use and enjoyment. An important objective of BLM’s habitat management program will be to work with state, local, and other federal partners to minimize or eliminate the need for additional listing of species under the Endangered Species Act in Washington County.	Crucial and substantial habitats for diverse native wildlife species on public lands provide high quality forage or a high quality prey base, as well as water, space, cover, and breeding areas, thereby sustaining viable populations and overall ecosystem biodiversity and resilience.  Multi-species habitat connectivity, migration routes, and movement corridors are conserved and protected between ecological zones to facilitate species persistence, adaptation, and overall biodiversity under predicted climate change scenarios.  Research is supported that increases the amount of baseline data related to all species of wildlife and their diverse habitat requirements.  Research is encouraged that increases general understanding of ecosystem processes and anthropogenic influences on changing climatic conditions.		
<b>Management Guidance Common to All Alternatives</b>			
Develop new wildlife waters in collaboration with UDWR in areas where field studies reveal the need for such to maintain healthy, viable populations of mule deer or other game and nongame species. Such waters will be developed in accordance with the objectives and guidelines of applicable game, nongame, and habitat management plans.			
Ensure that all existing and proposed artificial wildlife waters include escape ladders or are designed to allow safe access by game birds.			
Ensure that all new or replacement range-type fencing conforms to BLM specifications that allow safe passage for game and nongame wildlife species.			
<b>Management Actions</b>			
BLM will manage suitable public land habitats for the recovery or reestablishment of native populations through collaborative planning with local, state, and federal agencies, user groups, and interested organizations. BLM will also seek to limit additional adverse impacts to crucial habitats on public lands from urbanization and encroachment to preserve the integrity of wildlife corridors and migration routes and access to key forage, nesting, and spawning areas.	Authorize the reintroduction, transplantation, and augmentation of priority native wildlife species populations (as defined in <i>BLM Manual 1745</i> or subsequent guidance) into current or historic habitats in the NCA, in coordination with USFWS and UDWR in order to: (a) maintain current population numbers, distributions, and genetic diversity, and (b) restore or enhance native species populations.		

Table 2-58 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Mule Deer:</i>			
Crucial mule deer winter range will be protected from the potential effects of fluid mineral leasing with a Category 2 seasonal stipulation to close the lands to exploration or development from November 1 to April 15. Elk calving areas will be closed for the same reason from May 1 to July 30. These seasonal use restrictions will also be applied to mineral materials sales, forest product sales, and ROWs construction.  In collaboration with the UDWR and other interested parties, BLM will develop new wildlife waters in areas where field studies reveal the need for such to maintain healthy, viable populations of mule deer or other game and nongame species. Such waters will be developed in accordance with the objectives and guidelines of applicable game and nongame management plans, habitat management plans, and allotment management plans.	Manage mule deer habitat to assist UDWR in achieving long-term herd population goals and objectives.		
	Restrict dispersed camping to designated sites that do not impede wildlife access to water sources.		
	Remove unnecessary range-type fencing within the NCA to lessen potential for injuries and entanglement by mule deer, particularly fawns.		
	Include native vegetation species that benefit mule deer in upland habitat restoration and ES&R projects.		
<i>Gambel's Quail, Mourning Dove, and Other Game Birds:</i>			
No similar action.	Include native vegetation species that provide forage, cover, and nesting opportunities for quail and other game birds in habitat restoration and ES&R projects.		
No similar action.	Ensure that all existing and proposed livestock water troughs include escape ladders for game birds.	No similar action.	Same as Alternative B.
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites) that educate visitors about the diverse fish and wildlife species of the NCA.  Enhance opportunities for public viewing and photographing of mule deer, game birds, and other wildlife through special outreach activities such as guided wildlife photography hikes.  Authorize documentary and educational filming of wildlife through film permits, consistent with the Congressionally-defined purposes of conservation, protection, and restoration of resource values on public lands in the NCA.		

Table 2-58 Other Fish and Wildlife Habitat Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Research			
No similar action.	Pursue opportunities for scientific studies to collect population and life history data on carnivore species, such as mountain lion and bobcat, in the NCA.  Pursue opportunities for scientific studies related to the diversity, abundance, and distribution of small mammals that comprise the prey base for raptors, carnivores, and other predatory species, including rodents, desert cottontails, and black-tailed jackrabbits.		
Climate Change Monitoring			
No similar action.	Pursue opportunities to identify key riparian connectivity zones within and outside the NCA that will facilitate wildlife movement under predicted changes in seasonal precipitation patterns and increased ambient temperatures.		

Table 2-59 Heritage Resources

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Heritage resources are conserved, protected, and enhanced for the benefit of present and future generations, consistent with the Congressional mandates from OPLMA Section 1974.		
<b>Objectives</b>			
In managing cultural and paleontological resources on public lands, BLM will seek to:  a) Employ reasonable measures and land use controls needed to reduce impacts from urbanization and human encroachment;  b) Apply the principles of conservation management to selected areas to maintain such resources in their present condition for future study and enjoyment;  c) Reduce looting and vandalism through increased public education, surveillance, and enforcement;  d) Provide for legitimate field research by credible scientists and institutions;  e) Ensure compliance with applicable state and federal laws for consultation, assessment, and mitigation including consultation with interested or affected Indian tribes;  f) Provide for stabilization, maintenance, and interpretation of selected sites for public enjoyment and education.	Heritage resources currently documented or that may be documented in the future within the NCA are allocated and managed to the Use Allocations (as defined by <i>BLM Manual Section 8110.42</i> and <i>Land Use Planning Handbook H-1601-1</i> ) that are consistent with the legislative mandates from OPLMA for the NCA: Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.  Heritage resources of scientific interest currently documented or that may be documented in the future within the NCA are not allocated to Experimental Use or Discharged from Management, as these would not be consistent with the Congressionally-designated purposes for the NCA, as they relate to cultural and historical resources. See <b>Table 2-4</b> for descriptions of each Use Allocation category.  Public awareness and appreciation of heritage resources is enhanced through education and volunteer stewardship opportunities.  Appropriate heritage resource sites or groups of sites are nominated for inclusion in the National Register of Historic Places (NRHP), whenever warranted.  The integrity of setting and place is conserved, protected, and restored in areas where natural and cultural resources combine to form an important heritage landscape.		
<b>Management Guidance Common to All Alternatives</b>			
As required by federal historic preservation laws, continue consultations with the UTSHPO, American Indian Tribes, and other interested parties to inform and direct management decisions related to heritage resources.  Manage properties recommended as “potentially eligible” for inclusion in the NRHP as “eligible properties” until evaluative testing determines the status of that resource.  Complete implementation-level Cultural Resource Project Plans whenever warranted, in consultation with UTSHPO, American Indian Tribes, and other interested parties.			
<b>Management Actions</b>			
No similar action.	Conduct regular site monitoring and site condition assessments utilizing BLM staff and trained volunteer Site Stewards.		



Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Prehistoric Habitation Sites, Campsites, or Specialized Activity Areas:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of these NRHP- eligible sites for Scientific Use and Conservation for Future Use.	Allocate and manage 100% of these NRHP-eligible site types for Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.
No similar action.	General Management Actions:  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.  Prohibit geocaching in all Prehistoric Habitation Sites, Campsites, or Specialized Activity Areas.		
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.		
Conservation for Future Use:			
	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at intensively visited Public Use sites;  c) Install on-site informational signing on site etiquette and ARPA;  d) Perform surface collection of artifacts on all sites allocated to Public Use;  e) Prioritize Class III inventory in areas adjacent to Public Use sites.	NRHP- eligible prehistoric habitation sites, campsites, or specialized activity areas would not be managed for Public Use over the life of the RMP.	Same as Alternative B.

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Traditional Use:			
No similar action.	NRHP- eligible prehistoric habitation sites, campsites, or specialized activity areas would not be managed for Traditional Use over the life of the RMP.	NRHP- eligible prehistoric habitation sites, campsites, or specialized activity areas would not be managed for Traditional Use over the life of the RMP.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes to direct management of Traditional Use sites.
Rock Shelters, Alcoves, and Caves with Cultural Materials:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Traditional Use.  Allocate and manage rock shelters, alcoves, and caves identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.  Allocate and manage identified Traditional Cultural Properties for Traditional Use.		
No similar action.	General Management Actions:  Prioritize Class III inventory in areas with high potential for this site type to occur.  Conduct regular site monitoring, utilizing BLM staff and trained volunteer Site Stewards.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Prohibit geocaching in all Rock Shelters, Alcoves, and Caves with Cultural Materials.		
Scientific Use:			
No similar action.	Authorize data recovery excavation with appropriate research design which maximizes conservation of the site resources for future use and Native American and public involvement in the research.  Complete NRHP nominations for Scientific Use sites on a priority basis as identified in Cultural Resource Project Plans.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		
Toolstone Sources or Quarries:			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use and Conservation for Future Use.	Same as Alternative B.
No similar action.	General Management Actions:  Install informational signing on site etiquette and ARPA where evidence of public use exists.  Prioritize Class III inventory in areas with high potential for this type of site to occur.  Develop Cultural Resource Project Plans that include management direction related to the collection of non-artifact geologic materials from source/quarry locations.		

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize conservation of site resources for future use, as well as Native American and public involvement in the research.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at intensively visited Public Use sites;  c) Install on-site informational signing on site etiquette and ARPA;  d) Perform surface collection of artifacts on all sites allocated to Public Use;  e) Prioritize Class III inventory in areas adjacent to Public Use sites.	NRHP- eligible toolstone sources or quarries would not be managed for Public Use over the life of the RMP.	Same as Alternative B.
Rock Art Sites:			
No similar action.	Allocate and manage 100% of these sites for Scientific Use, Conservation for Future Use, Public Use, and Traditional Use.	Allocate and manage 100% of these sites for Scientific Use, Conservation for Future Use, and Traditional Use.	Same as Alternative B.
No similar action.	Allocate and manage rock art sites with evidence of public visitation for Scientific Use, Public Use, and Traditional Use.	Allocate and manage rock art sites with evidence of public visitation for Scientific Use and Conservation for Future Use.	Same as Alternative B.
No similar action.	Allocate and manage rock art sites with no evidence of public visitation for Conservation for Future Use and Traditional Use.	Allocate and manage rock art sites with no evidence of public visitation for Conservation for Future Use.	Allocate and manage rock art sites with no evidence of public visitation for Scientific Use, Conservation for Future Use, and Traditional Use.

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Allocate and manage rock art sites with evidence of public visitation for Scientific Use and/or Public Use.  Allocate and manage rock art sites with no evidence of public visitation for Conservation for Future Use.  Allocate and manage rock art sites identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.		
No similar action.	Allocate and manage rock art sites identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.		
No similar action.	General Management Actions: Manage all rock art sites as eligible for inclusion in the NRHP. Prioritize Class III inventories in areas with high potential for this site type to occur. Professionally document all rock art sites by photographing, mapping, and developing detailed measured drawings of all elements and cultural materials using the best available technology. Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions. Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data. Install informational signing on site etiquette and ARPA where evidence of public visitation exists. Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists. Prohibit geocaching at all Rock Art sites. Professionally document all rock art sites by photographing, mapping, and developing detailed measured drawings of all elements and cultural materials using the best available technology. Manage all rock art sites as “eligible properties” for inclusion in the NRHP.		
Scientific Use:			
No similar action.	Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and information potential of sites.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites;  b) Install visitor registers at	Rock art sites would not be managed for Public Use over the life of the RMP.	Same as Alternative B.



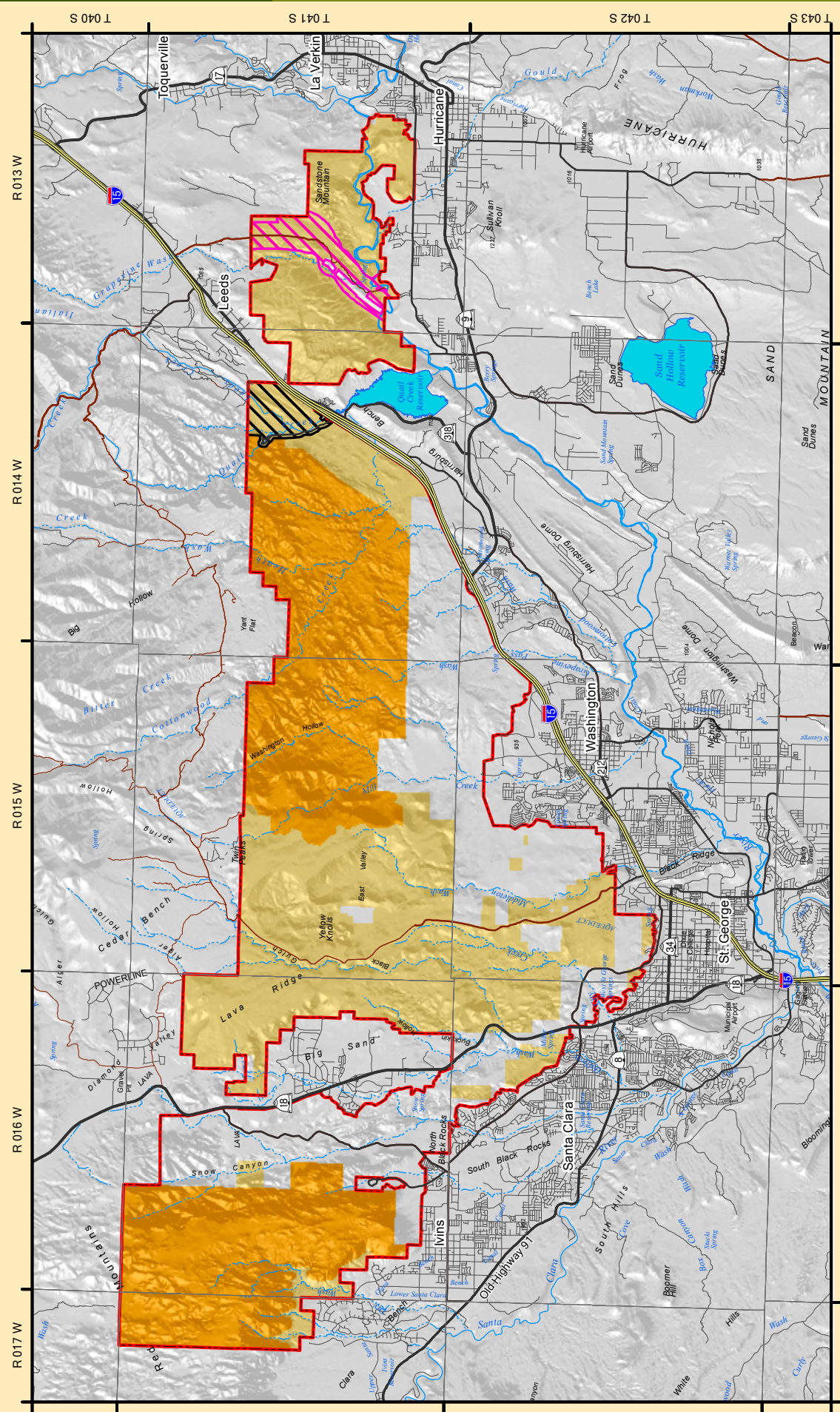
Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	intensively visited Public Use sites;  c) Install on-site information-al signing on site etiquette and ARPA;  d) Perform surface collec-tion of artifacts on all sites allocated to Public Use;  e) Prioritize Class III invento-ry in areas adjacent to Public Use sites;  f) Develop trails, viewing platforms, passive barriers, or other facilities to man-age visitor uses and protect resource values at intensively visited Public Use sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		
<i>Ethno-historic Sites, Sacred Sites, Traditional Cultural Properties, Traditional Use Areas:</i>			
No similar action.	Allocate and manage 100% of these NRHP-eligible ethno-historic sites for Scientific Use, Conservation for Future Use and Traditional Use.  Allocate and manage Traditional Cultural Properties and Traditional Use Areas for Traditional Use.  Allocate and manage sites identified as Sacred Sites for Conservation for Future Use and/or Traditional Use.		
No similar action.	General Management Actions:  Develop detailed site records of all identified ethno-historic sites, Sacred Sites, Traditional Cultural Properties, and traditional use areas.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandal-ism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Conduct regular monitoring patrols, utilizing BLM staff and trained volunteer Site Stewards. Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data.  Install informational signing on site etiquette and ARPA where evidence of public use exists. Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists.  Prohibit geocaching at all Ethno-historic sites, Sacred Sites, Traditional Cultural Properties, and Traditional Use Areas.		
Scientific Use:			
No similar action.	Authorize data recovery excavations under appropriate research designs that emphasize con-servation of site resources for future use, as well as Native American and public involvement in the research.  Authorize surface collection of artifacts under the authority of ARPA, if warranted by threats of loss or destruction.		

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and tradi- tional heritage values of sites.		
Traditional Use:			
No similar action.	Complete implementation-level Cultural Resource Project Plans, in consultation with culturally-affiliated American Indian Tribes.		
<i>Historic Roads, Trails, Highways, and Associated Travel-related Sites and Features:</i>			
No similar action	Allocate and manage 100% of NRHP-eligible properties for Scientific Use, Conservation for Future Use, and Public Use.		
No similar action.	General Management Actions:  Complete Class III level inventory of the travel corridor for each site to establish baseline data on linear heritage resources and associated travel-related sites and features.  Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandal- ism) through installations of physical barriers (e.g., fencing, plantings) or other management actions.  Conduct regular monitoring patrols, utilizing BLM staff and trained volunteer Site Stewards. Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data. Prohibit geocaching at all Associated Travel-related Sites and Features.		
Scientific Use:			
No similar action.	Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction.  Prepare a historic context for each resource as prioritized by Cultural Resource Project Plans.		
Conservation for Future Use:			
No similar action.	Do not authorize activities or research studies that will directly impact the integrity and infor- mation potential of sites.		
	Emphasize conservation of setting and place in management actions identified in Cultural Resource Project Plans.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below:  a) Develop on and off-site interpretation for intensively visited Public Use sites; b) Install visitor registers at intensively visited Public Use sites; c) Install on-site informational signing on site etiquette and ARPA; d) Install roadside markers and directional signing; e) Prepare visitor use maps and driving, biking, and hiking guides; f) Construct pullouts and wayside exhibits with visitor amenities (e.g., restrooms, information kiosks), where appropriate.		
<i>Historic Mining, Ranching/Farming/Livestock Grazing Sites, Buildings, Standing Structures, and Landscapes:</i>			
No similar action.	Allocate and manage 100% of these NRHP-eligible sites for Scientific Use, Conservation for Future Use, and Public Use.		

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	General Management Actions: Complete appropriate scale Class III level inventory to identify all associated sites, features, and structures. Protect sites from impacts related to authorized uses and unauthorized activities (e.g., vandalism) through installations of physical barriers (e.g., fencing, plantings) or other management actions. Conduct regular monitoring patrols, utilizing BLM staff and trained volunteer Site Stewards. Stabilize sites where erosion and/or vandalism threaten loss of site integrity and data. Evaluate risks at fire-susceptible sites and remove hazardous fuels where threat of site damage or loss to wildfire exists. Prohibit geocaching at all Historic Mining, Ranching/Farming/Livestock Grazing Sites, Buildings, and Standing Structures.		
Scientific Use:			
No similar action.	Authorize surface collection of artifacts under the authority of ARPA if warranted by threats of loss or destruction. As prioritized by Cultural Resource Project Plans: a) Complete an intensive archaeological inventory of the resources to collect baseline data; b) Collect oral histories; c) Prepare a historic context for each site; d) Develop photo documentation of historic buildings, structures, features, and landscapes; e) Complete Level 1 HABS documentation, including elevations, plans, measured drawings, photos; f) Complete appropriate level HALS documentation, where warranted.		
Conservation for Public Use:			
No similar action.	Emphasize conservation of setting and place in management actions identified in Cultural Resource Project Plans.		
	Perform stabilization and/or rehabilitation of buildings or standing structures as prioritized by Cultural Resource Project Plans.		
Public Use:			
No similar action.	Complete implementation-level plans (e.g., Cultural Resource Project Plans, Recreation Management Plans, Interpretation Plans) to direct management of Public Use sites that may contain one or more of actions listed below: a) Develop on and off-site interpretation for intensively visited Public Use sites to increase public awareness and appreciation of historic period mining, ranching and agricultural activities in the NCA; b) Install visitor registers at intensively visited Public Use sites; c) Install on-site informational signing on site etiquette and ARPA; d) Perform surface collection of artifacts on all sites allocated to Public Use; e) Prioritize Class III inventory in areas adjacent to Public Use sites.		

Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Yellow Knolls Heritage Area:			
No similar action.	Same as Alternative A. (Map 2-28)	Manage approximately 1,196 acres of public land as the Yellow Knolls Heritage Area to maintain and protect the integrity of setting and place with a focus on prehistoric rock art, subsistence strategies, and resource procurement (Map 2-29).	Same as Alternative A. (Map 2-28)
No similar action.	Same as Alternative A. (Map 2-28)	Develop off-site interpretation at wayside exhibits along the non-motorized Yellow Knolls Trail system.  Manage Heritage Area as VRM Class II.  Manage for non-motorized recreation (hiking, mountain biking, equestrian use) on designated trails.  Manage for day use only.  Prohibit geocaching in all archaeological sites in the Yellow Knolls Heritage Area.	Same as Alternative A. (Map 2-28)
White Reef Heritage Area:			
No similar action.	Manage approximately 787 acres of public land as the White Reef Heritage Area to maintain and protect the integrity of setting and place with a focus on the historic roads, structures, and features related to mid-19th Mormon settlement at Harrisburg and silver mining in the Harrisburg/Silver Reef District (Maps 2-28 and Map 2-29).		
No similar action.	Develop on and off-site interpretation at wayside exhibits along the non-motorized White Reef trail system.  Manage Heritage Area as VRM Class II.  Manage for non-motorized recreation (hiking, mountain biking, equestrian use) on designated trails.  Manage for day use only.  Prohibit geocaching in all archaeological sites in the White Reef Heritage Area.		
Babylon Heritage Corridor:			
No similar action.	Manage approximately 1,028 acres of public land as the Babylon Heritage Corridor to maintain and protect the integrity of setting and place with a focus on significant vertebrate and plant fossil resources, prehistoric rock art, historic roads, structures, and features related to late 19th century silver mining and milling in the Harrisburg/Silver Reef District (Map 2-28 and Map 2-29).		





Heritage Areas - Red Cliffs NCA - Alternative B, D

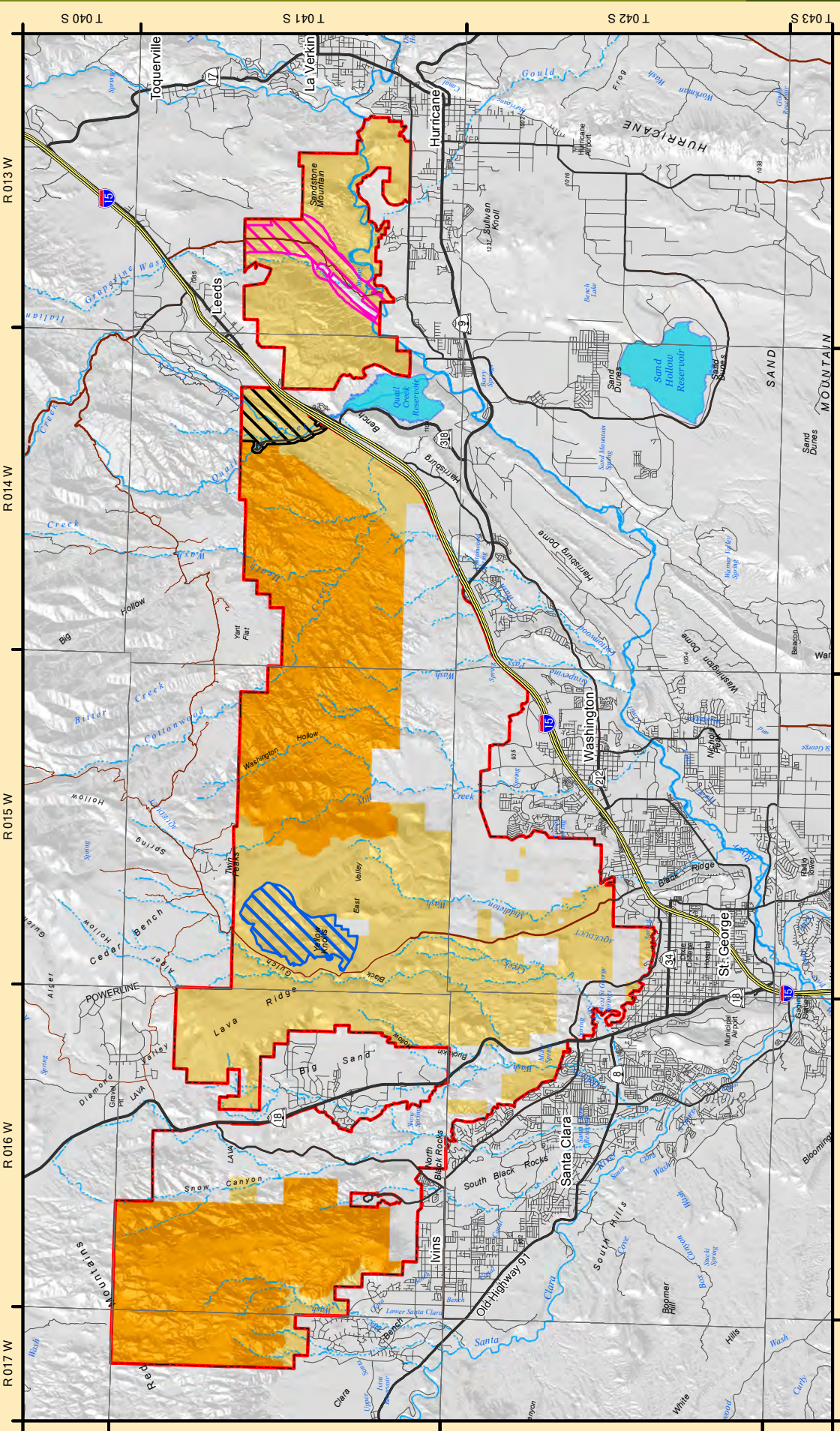
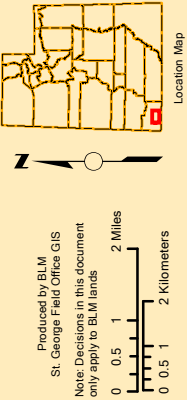
- National Conservation Area Bndry
- Babylon Heritage Area
- White Reef Heritage Area
- BLM Wilderness Area
- Bureau of Land Management



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Heritage Areas - Red Cliffs NCA - Alternative C

- National Conservation Area Bndry
- Babylon Heritage Area
- White Reef Heritage Area
- Yellow Knolls Heritage Area
- BLM Wilderness Area
- Bureau of Land Management



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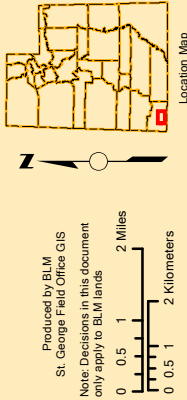




Table 2-59 Heritage Resources			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
No similar action.	Develop on and off-site interpretation at wayside exhibits along the Babylon Road. Manage Heritage Corridor as VRM Class II. OHV area designation is Limited to Designated Roads and Trails with individual routes designated through the TMP. Manage for day use only. Prohibit geocaching in all archaeological sites in the Babylon Heritage Area.		
Public Education and Interpretation			
BLM will collaborate with local communities, organizations, local and state agencies, Indian tribes, and other interested parties in developing and implementing plans for the restoration, stabilization, protection, and/or interpretation of appropriate historical, archaeological, or paleontological sites and resources on public lands in Washington County.	Develop heritage tourism sites focusing on appropriate types of sites that have been identified for Public Use. Sponsor educational programs for school groups, civic organizations, elected officials, and public land user groups that increase public appreciation for the unique and irreplaceable heritage resources of the NCA. Sponsor trainings and information dissemination to youth and scout groups, recreational user groups, and the general public about programs like “Tread Lightly” and “Leave No Trace” that help to protect heritage resources. Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on heritage resources and appropriate site etiquette when visiting Public Use sites. Promote opportunities for volunteer involvement in Site Stewardship and Docent programs that increase public awareness of the need to conserve and protect heritage resources. Recruit and train youth and veteran groups, citizen stewards, and other volunteers to participate in site clean-up and restoration, as well as archaeological inventory and data recovery projects that enhance public understanding of regional cultural history and the heritage values of the NCA.		
Scientific Research			
No similar action.	Scientific research is encouraged that increases the cultural resource inventory database and serves to improve baseline knowledge and general understanding of cultural and historical resources of the NCA. Research will be authorized at sites allocated to Scientific Use, as described above by the specific type of site.		
Climate Change Monitoring			
No similar action.	Pursue opportunities for research studies to utilize data recovered from archaeological contexts in the NCA to identify changes in native vegetation communities, faunal assemblages, and aboriginal subsistence strategies that could provide data for comparison with modern climate trends.		

Table 2-60 Wilderness (Red Mountain and Cottonwood Canyon Wilderness)

Table 2-60 Wilderness (Red Mountain and Cottonwood Canyon Wilderness)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Preserve wilderness character in accordance with the Wilderness Act of 1964 and OPLMA.		
Objectives			
No similar action.	Manage the Red Mountain and Cottonwood Canyon Wilderness in accordance with the Wilderness Act of 1964, OPLMA, and <i>BLM Manual 6340</i> .		
Management Actions			
No similar action.	Manage wilderness areas in the NCA in conformance with implementation-level decisions from the Wilderness Management Plan for the Red Mountain and Cottonwood Canyon Wilderness, when completed.		



Table 2-61 Areas of Critical Environmental Concern

Table 2-61 Areas of Critical Environmental Concern (ACEC)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Special management attention is directed to the protection of diverse NCA resource values and natural systems.		
Objectives			
Where BLM determines that certain public land areas require special management to prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems, it may, with appropriate public participation, designate such lands as ACECs.	Re-evaluate existing ACECs when developing new or revised RMPs to determine if special management attention through this administrative designation continues to be required.		
Management Actions			
The Red Mountain ACEC encompasses 4,854 acres. Red Mountain serves as a spectacular backdrop to the communities of Ivins and Santa Clara and has significance to members of local Indian tribes. The escarpment overshadows the west boundary of the Tuacahn Center and portions of Snow Canyon State Park and, as such, adds to the natural beauty of both developments. The intent of this ACEC is to preserve the scenic cliff face from visible disturbance. Where the ACEC overlaps with the Red Mountain Special Recreation Management Area, recreation prescriptions will be subordinate to ACEC objectives and prescriptions.  (Map 2-30)	Revoke the administrative designation of the 4,854-acre Red Mountain ACEC, as described in the SGFO RMP (BLM 1999: Decision AC-09, page 2.68; Map 2.17, page 2-90). The ACEC is entirely located within the Red Mountain Wilderness, designated through OPLMA in 2009, and partially contained within the NCA. Manage these public lands in conformance with implementation-level decisions from the Wilderness Management Plan for the Red Mountain and Cottonwood Canyon Wilderness Areas, when completed.		

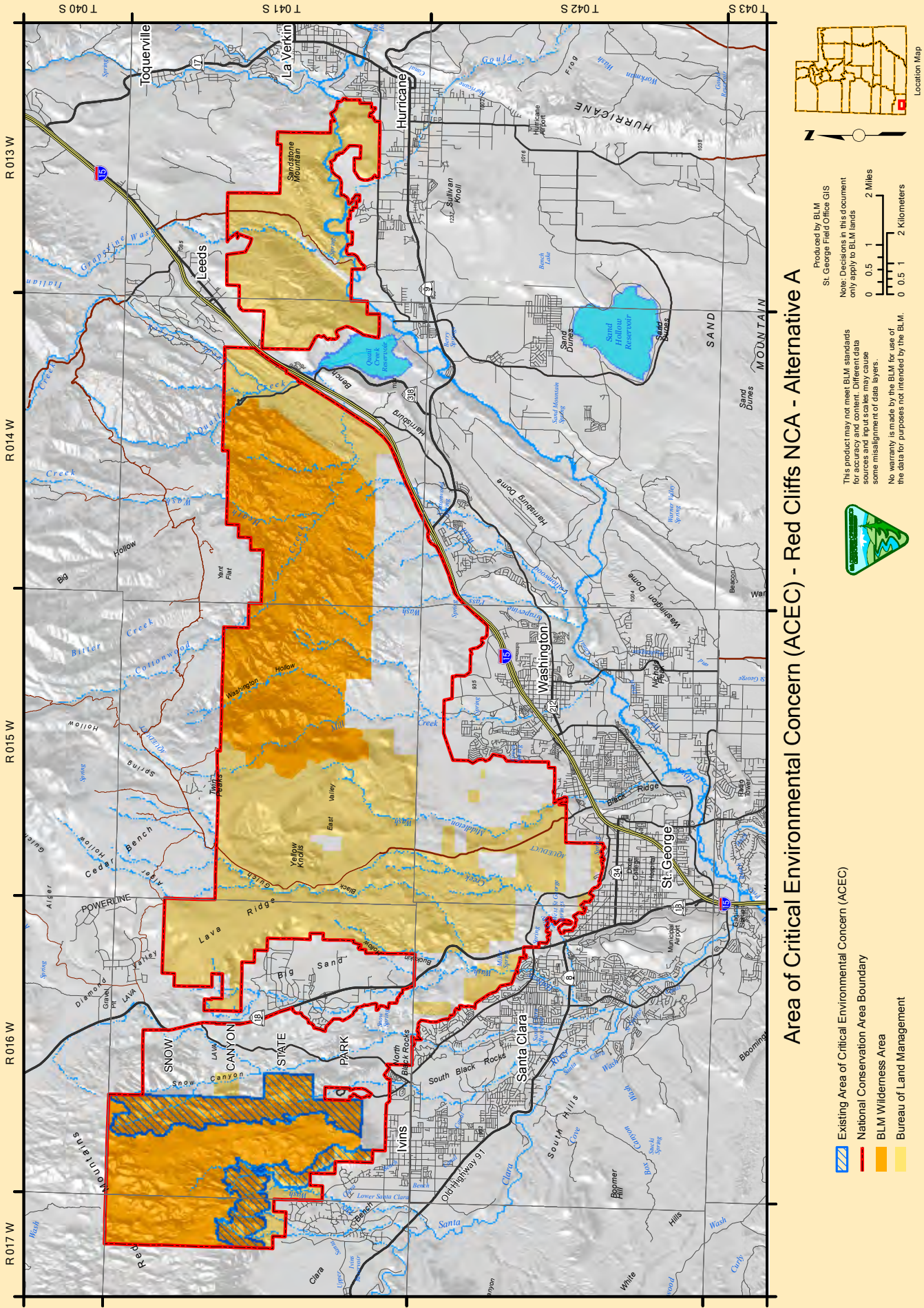


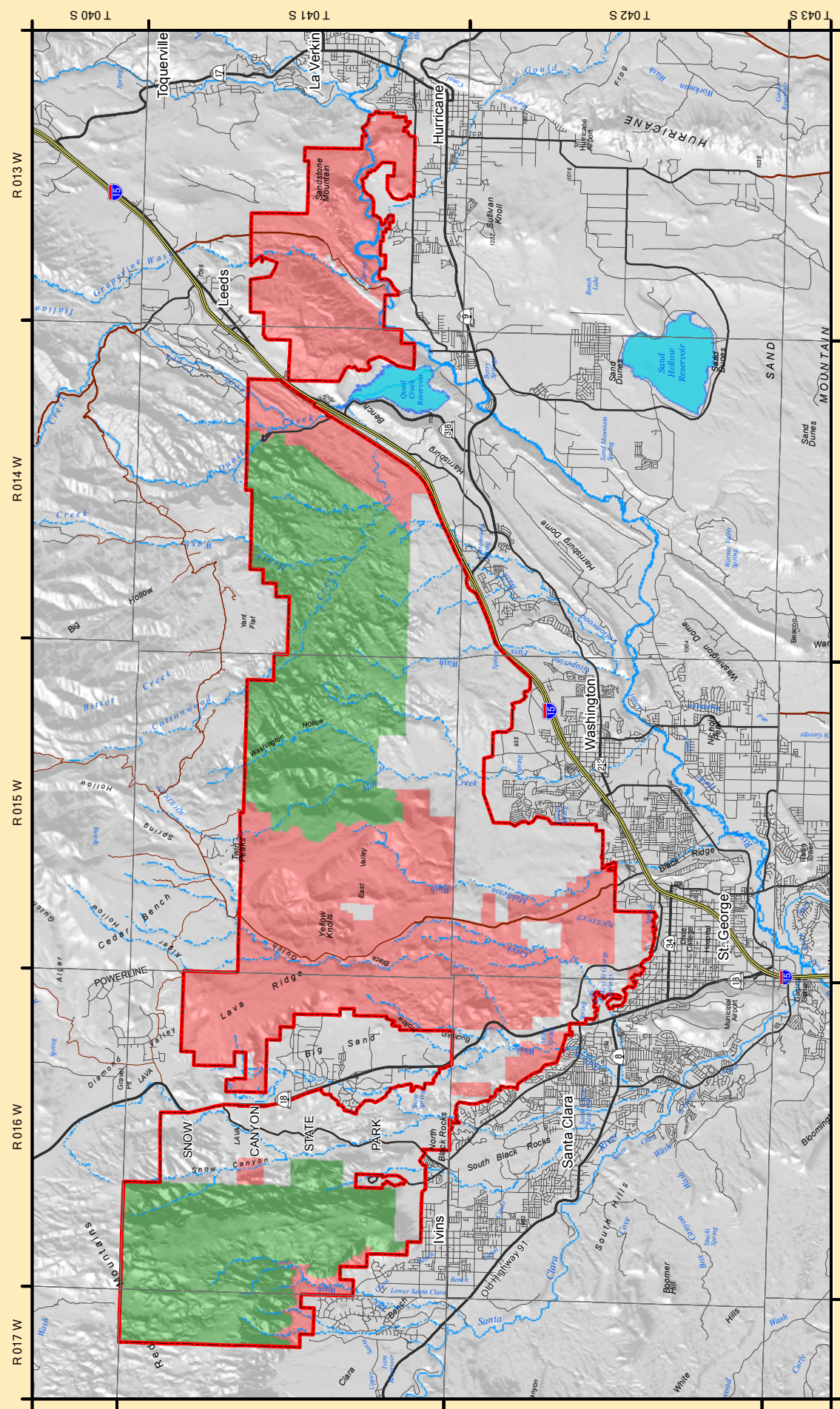


Table 2-62 Visual Resource Management (VRM)

Table 2-62 Visual Resource Management (VRM)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	The open spaces, natural aesthetics, and scenic vistas of the NCA are protected for social, economic, and environmental benefits.		
Objectives			
BLM’s objective will be to manage the public lands in such a way as to preserve those scenic vistas which are deemed to be most important:  a) In their impact on the quality of life for residents and communities in the area;  b) In their contribution to the quality of recreational visitor experiences;  c) In supporting the regional tourism industry and segments of the local economy dependent on public land resources.  Moreover, BLM will seek to complement the rural, agricultural, historic, and urban landscapes on adjoining private, state, and tribal lands by maintaining the integrity of background vistas on the public lands.	Visual quality and integrity are maintained in accordance with established VRM Management Class criteria:  <i>Class I Objective:</i> The existing character of the landscape is preserved. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.  <i>Class II Objective:</i> The existing character of the landscape is retained. The level of change to the characteristic landscape should be low. Changes can be seen but should not attract the attention of the casual viewer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.  <i>Class III Objective:</i> The existing character of the landscape is partially retained. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.  <i>Class IV Objective:</i> To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements found in the predominant natural features of the characteristic landscape.		
Management Actions			
No similar action.	Use architectural design standards that create a unique and recognizable identity for the NCA. The standards would include, but are not limited to: fencing design, signage requirements, vegetative screening, siting requirements, and the height, shape, and color of proposed structures.		
No similar action.	Incorporate visual and architectural design considerations during the project design phase for all new surface disturbing projects or activities, regardless of size or potential impact.		
No similar action.	Conduct ecosystem restoration projects that meet VRM objectives for the NCA over the long-term (over the anticipated life of the restoration project). In the short term (5 years or less) or the mid-term (5-10 years), VRM objectives for restoration projects in the NCA would not have to be met.		
No similar action.	Use the best available technology to minimize light emissions from all authorized facilities.		
No similar action.	Retroactively prioritize and apply architectural design standards to existing structures and facilities.		
No similar action.	Reduce or prevent impacts to night skies through the application of specific mitigation measures. These measures could include, but are not limited to: directing all light emissions downward, using shielded light sources, using only the minimum illumination necessary, using light sources less prone to atmospheric scattering, and using circuit timers or motion sensors.		

Table 2-62 Visual Resource Management (VRM)			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
VRM Class I: 19,989 acres VRM Class II: 0 acres VRM Class III: 24,870 acres VRM Class IV: 0 acres (SGFO RMP Map 2.14) (Map 2-31)	Manage the NCA as follows: VRM Class I: 19,989 acres VRM Class II: 21,034 acres VRM Class III: 3,652 acres VRM Class IV: 184 acres (Map 2-32)	Manage the NCA as follows: VRM Class I: 21,574 acres VRM Class II: 23,285 acres VRM Class III: 0 acres VRM Class IV: 0 acres (Map 2-33)	Manage the NCA as follows: VRM Class I: 19,989 acres VRM Class II: 18,336 acres VRM Class III: 0 acres VRM Class IV: 6,534 acres (Map 2-34)



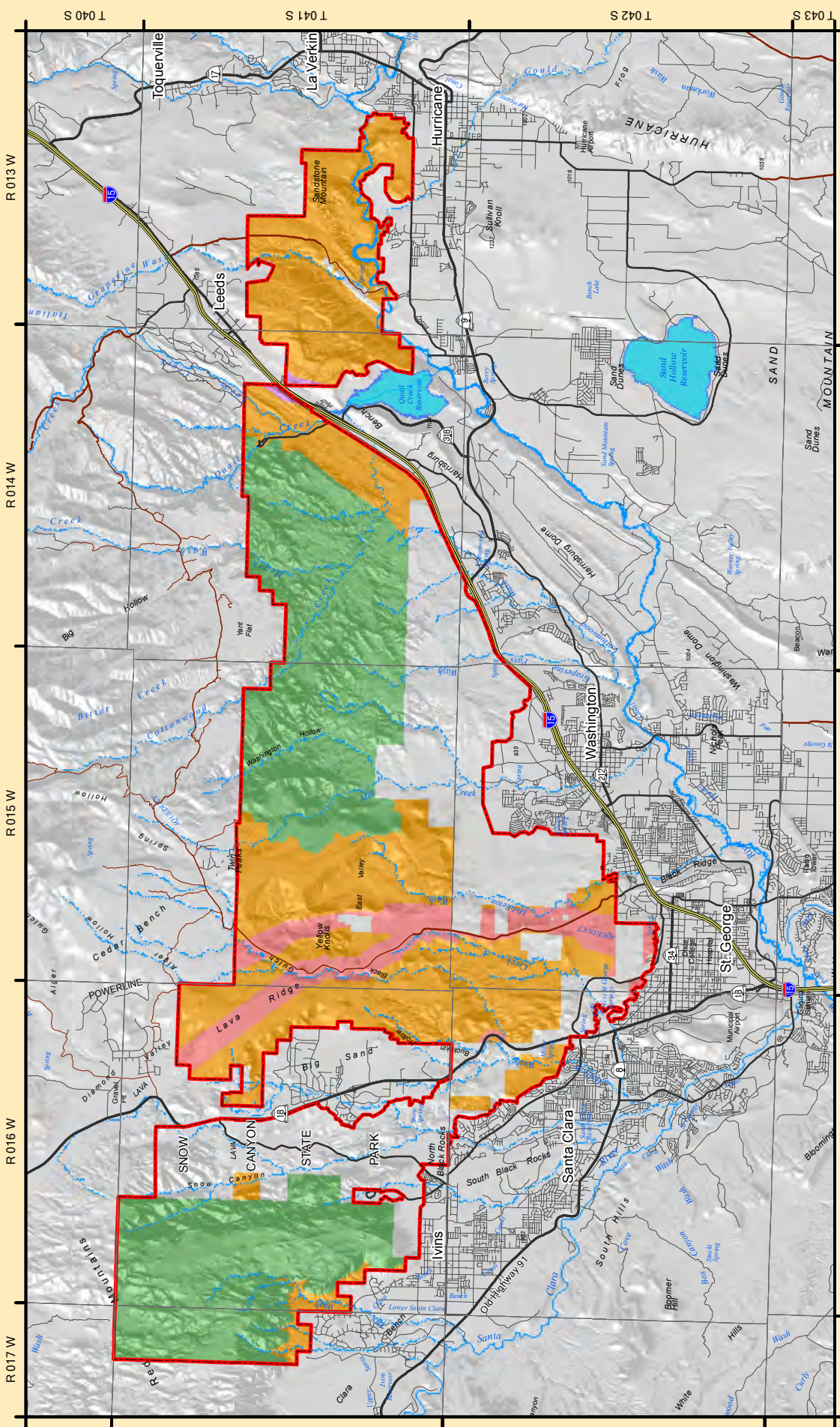
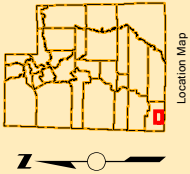


Visual Resource Management Designations - Red Cliffs NCA - Alternative A

**VRM Class**  
Class 1  
Class 2  
Class 3  
Class 4  
National Conservation Area Boundary



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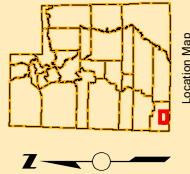


Visual Resource Management Designations - Red Cliffs NCA - Alternative B

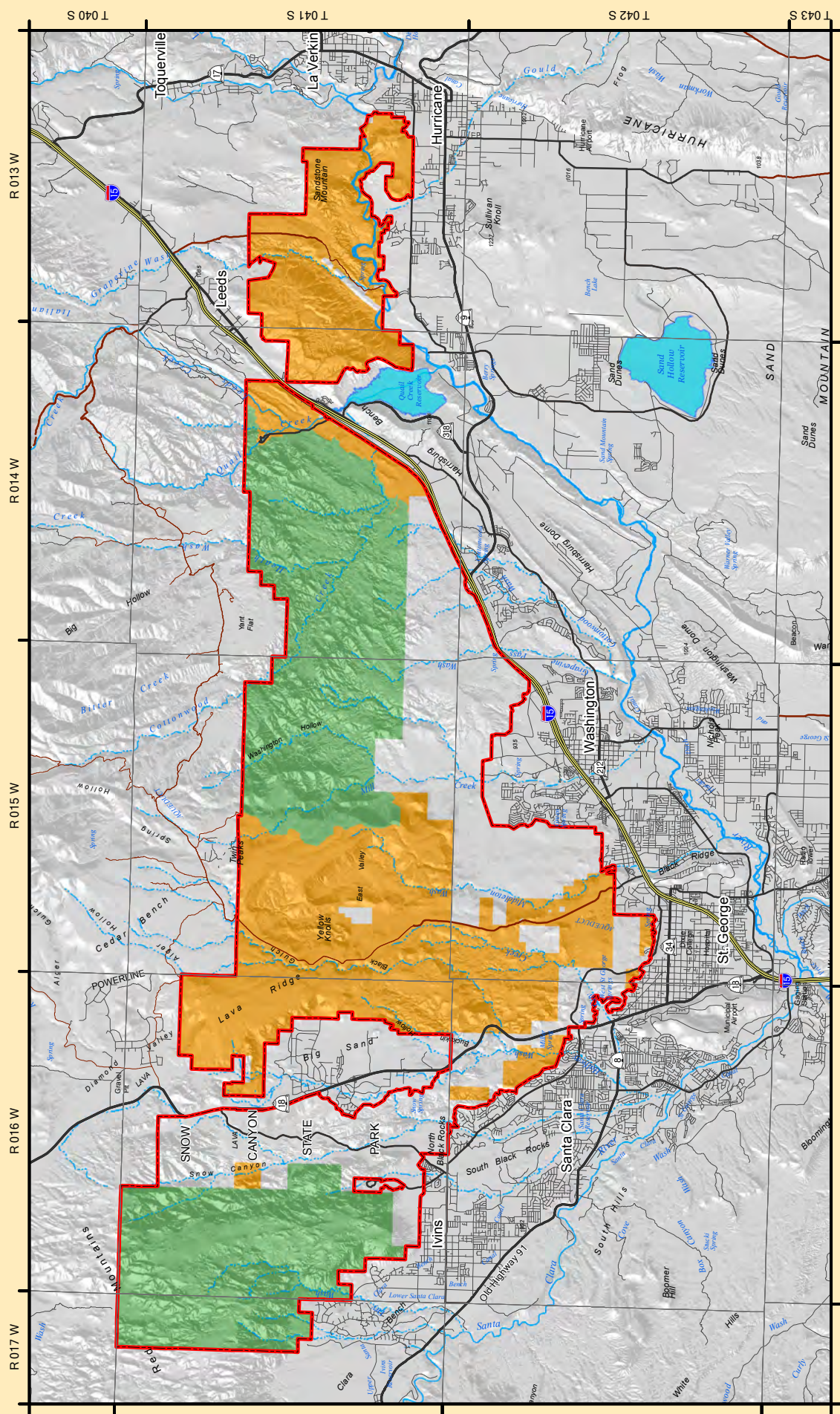
**VRM Class**  
Class 1  
Class 2  
Class 3  
Class 4  
National Conservation Area Boundary



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Visual Resource Management Designations - Red Cliffs NCA - Alternative C

VRM Class

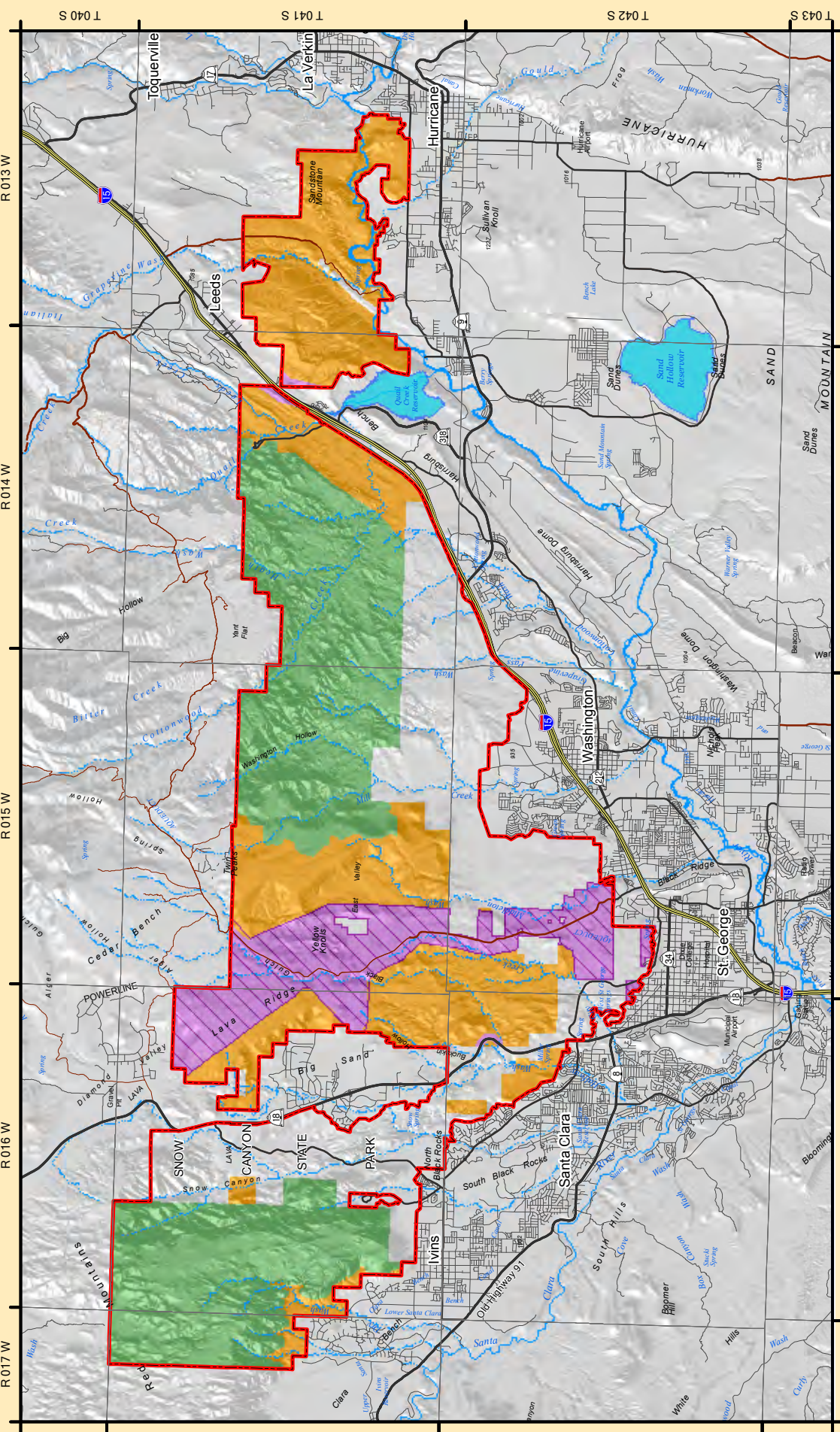
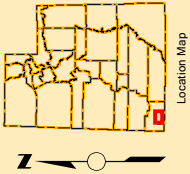
- Class 1
- Class 2

National Conservation Area Boundary



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Visual Resource Management Designations - Red Cliffs NCA - Alternative D

VRM Class

- Class 1
- Class 2
- Class 3
- Class 4

Utility ROW

National Conservation Area Boundary



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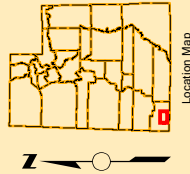


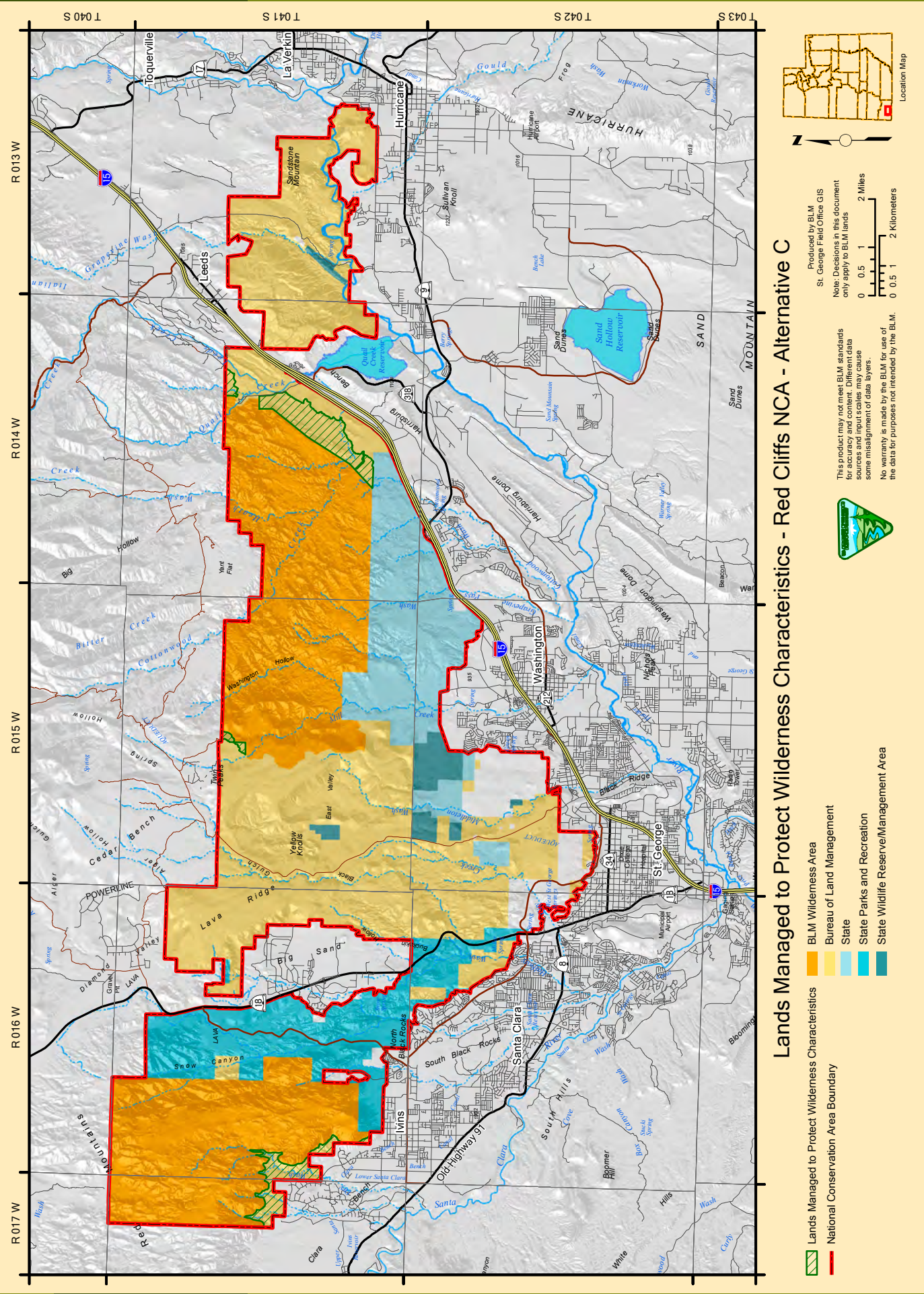


Table 2-63 Natural Soundscapes

Table 2-63 Natural Soundscapes			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Public land users can experience natural soundscapes in the NCA.		
Objectives			
No similar action.	Land uses and authorized activities are managed to conserve and protect natural soundscapes.		
Management Actions			
No similar action.	Identify and provide opportunities for visitors to enjoy the atmosphere of peace and tranquility afforded by the natural soundscapes of the NCA.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, websites, educational programs, school curriculum) focused on increasing public awareness of natural quiet and the benefits of protecting natural soundscapes where they are present in the NCA.		
Scientific Research			
No similar action.	Identify appropriate acoustic monitoring locations in the NCA using established protocols.  Install sound level meters and supporting hardware to collect, analyze, and determine the levels and types of natural sounds in the NCA and to identify potential anthropogenic sources of soundscape impacts.		

Table 2-64 Lands with Wilderness Characteristics

Table 2-64 Lands with Wilderness Characteristics			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Lands with wilderness characteristics in the NCA are managed to conserve, protect, and restore those values.		
Objectives			
No similar action.	Inventory all lands with wilderness characteristics in the NCA.  Avoid potential project-related impacts through land use authorizations and project design.  Naturalness is conserved and protected through appropriate management actions.  Naturalness is restored in damaged areas through management actions to re-establish native vegetation communities.		
Management Actions			
No similar action.	Do not identify management prescriptions to specifically maintain lands with wilderness characteristics.	Manage 1,586 acres (Map 2-35) to protect lands with wilderness characteristics with the following prescriptions:  a) Manage as VRM Class I;  b) OHV area designation is Limited to Designated Roads and Trails;  c) Do not authorize commercial and non-commercial woodland product harvest (e.g., pole, post, firewood cutting), or seed and plant material collection;  d) Manage as a ROW Exclusion area.	Same as Alternative B.



Lands Managed to Protect Wilderness Characteristics - Red Cliffs NCA - Alternative C

Table 2-65 Recreation and Visitor Services

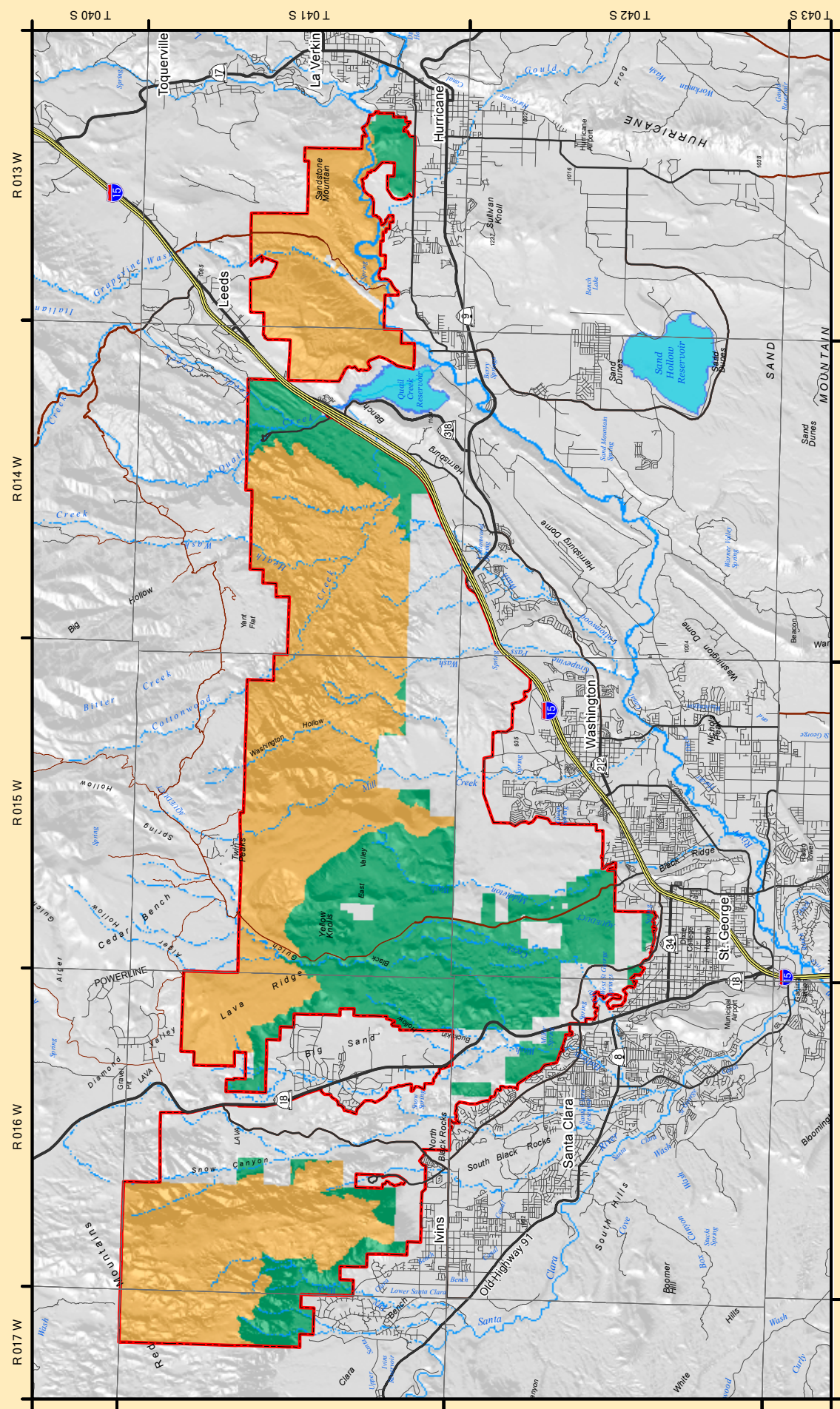
Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	High quality sustainable recreation opportunities and visitor services are provided. Those opportunities support the quality of life of NCA visitors as well as local communities, regional economies and the resource values of the NCA.		
<b>Objectives</b>			
BLM’s objective for recreation management will be to provide an array of quality recreation experiences within the agency’s capability and logical recreation niche to meet the reasonable needs and expectations of local residents and visitors from outside the area. Because the fiscal and staffing resources available to BLM are likely to remain inadequate to fully accomplish this objective, BLM will use innovative partnerships, pursue grant monies, and work with volunteers, organized user groups, and other recreation providers in developing and managing selected recreation opportunities on the public lands.	Protect NCA resource and recreation values using the following: a) Trail and facility design; b) Directional, informational, regulatory, traffic control, boundary, and trail signs; c) Maps and associated digital technology; d) Appropriate law enforcement; e) Interpretative materials and educational programs; f) Citizen stewardship.		
<b>Management Actions: Recreation Management Areas</b>			
Extensive Recreation Management Areas are those public land areas where recreation management is only one of several management programs applied to the land and where recreation is typically extensive and unstructured in character. Such areas may contain occasional recreation sites such as the Baker Dam or Red Cliffs facilities. Emphasis will be placed on dispersed recreation, trail development, signing, maintenance of primitive and semiprimitive characteristics, management or abatement of natural and man-made hazards, and protection of resources and sites of recreational interest.  Red Mountain/Santa Clara	Remove those portions of the Red Mountain/Santa Clara SRMA and the SGFO ERMA administrative designations that overlap the NCA.		



Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
SRMA encompasses 44,859 acres of public land.			
“Because the Reserve was established to protect the tortoise and its habitat, off-trail use is prohibited, except within the Upland Zone (PUP 2001). (Map 2-36)	Do not carry forward the Upland and Lowland Zones from the PUP.		
No similar action.	Establish the Red Cliffs SRMA, as shown on Map 2-37, Map 2-38, and Map 2-39.		
No similar action.	Red Cliffs NCA SRMA, Recreation and Visitor Services Objectives:  Foster a sense of awareness and stewardship in recreational participants and local community partners to maintain recreation values in the NCA.  Provide opportunities for public land users to develop an understanding and appreciation of the NCA through on and off-site educational and interpretative materials.  Develop a nationally recognized non-motorized trail system that provides high quality opportunities for a wide range of recreational activities  Develop trailheads and waysides that share a signature design emblematic of the NCA		
No similar action.	Establish four RMZs within the Red Cliffs SRMA as management tools to assist in setting priorities for facilities development, maintenance, and law enforcement. Each zone would have consistent management objectives across Alternative but would vary in size. See Table 2-66 for information about each zone and Appendix H for detailed RMZ descriptions and objectives.		
No similar action.	Manage the RMZs as follows:  Rural Zone: 1,224 acres  Frontcountry Zone: 14,937 acres  Backcountry Zone: 8,709 acres  Primitive Zone: 19,989 acres (Map 2-37)	Manage the RMZs as follows:  Rural Zone: 1,204 acres  Frontcountry Zone: 22,080 acres  Backcountry Zone: 0 acres Primitive Zone: 21,575 acres (Map 2-38)	Manage the RMZs as follows:  Rural Zone: 1,225 acres  Frontcountry Zone: 9,397 acres  Backcountry Zone: 14,248 acres  Primitive Zone: 19,989 acres (Map 2-39)
No similar action.	Allowable uses for other resources and programs within the SRMA are defined by the NCA legislation. Allowable recreation uses have been defined by RMZ and can be found in Table 2-66 and Appendix H.		
No similar action.	Coordinate management of recreational activities and uses with adjacent federal agencies, tribal governments, and state, county, and municipal governments.		
No similar action.	Develop an implementation-level Recreation Area Management Plan (RAMP) to identify specific management actions for recreational activities and visitor services within the SRMA. On BLM-administered lands, the RAMP would replace the implementation-level PUP for the Red Cliffs Desert Reserve (PUP 2001). The RAMP would include, but is not limited to:  a) Non-motorized trail system development and management;  b) Motorized route system management;  c) Rock climbing management;  d) Campground development and management;  e) Dispersed camping management;		

Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	f) Architectural design standards; g) Recreational impact monitoring standards and procedures. h) Commercial, competitive, and group use management.		
No similar action.	Develop concessionaire contracts, if necessary, to protect resource values, as well as provide for appropriate and sustainable recreation opportunities and visitor services.		
No similar action.	Manage any non-federal lands that may be acquired within the NCA in conformance with RMZ decisions for adjacent public lands.		
Special Recreation Permits (SRPs):			
No similar action.	Prohibit SRPs for competitive equestrian events in the NCA.		
No similar action.	Prohibit SRPs for competitive motorized events in the NCA.		
No similar action.	Limit SRPs for motorized recreation activities to roads and primitive roads authorized for use by the public.		
Discharge of Firearms:			
“The discharge of firearms in the Reserve is prohibited except in the act of hunting big game and upland game species by licensed hunters in accordance with this Plan, current city and county ordinances, and state laws during prescribed seasons.” (PUP 2001).	Prohibit the discharge of firearms, except in the act of licensed hunting according to state laws during prescribed seasons.		
“Hunting dogs are allowed to travel off-leash with a licensed hunter in the act of hunting during official hunting seasons.” (PUP 2001).	Allow hunting dogs to be off-leash in the NCA when accompanied by a licensed hunter in the act of hunting during official seasons.		
No similar action.	Prohibit paintball activities of any kind.		
Public Education and Interpretation			
No similar action.	Develop an implementation-level Interpretive Master Plan that creates a long-range vision to guide interpretative services that emphasize the values and significance of the NCA and addresses a long-term strategy for name recognition and branding. The plan will include the following:  a) Interpretative goals, objectives, and associated management actions necessary for interpreting themes to key user groups/audiences;  b) Identification of a full range of interpretive services including facilities, programs, activities, exhibits, publications/printed materials, electronic media, and audiovisuals to enhance knowledge and appreciation of natural and cultural resources, and to promote stewardship;  c) Identification of opportunities for outreach programs with user groups, local schools, universities, and special interest groups;  d) Identification of opportunities to enrich interpretation through partnerships with municipal, county, state, and national parks, educational institutions, and other organizations;  e) Identification of desired visitor experiences consistent with the RAMP and RMZs;  f) Identification of themes and sub-themes to communicate the story of place (e.g., those narratives that express the unique and compelling character of the NCA);  g) Consistency with NCA architectural design standards (e.g., color, shape, themes) that will		





Special Recreation Management Areas (SRMA) - Red Cliffs NCA - Alternative A (No Action)

Red Cliffs NCA - Management Zones

- Lowland Zone
- Upland Zone
- National Conservation Area Boundary



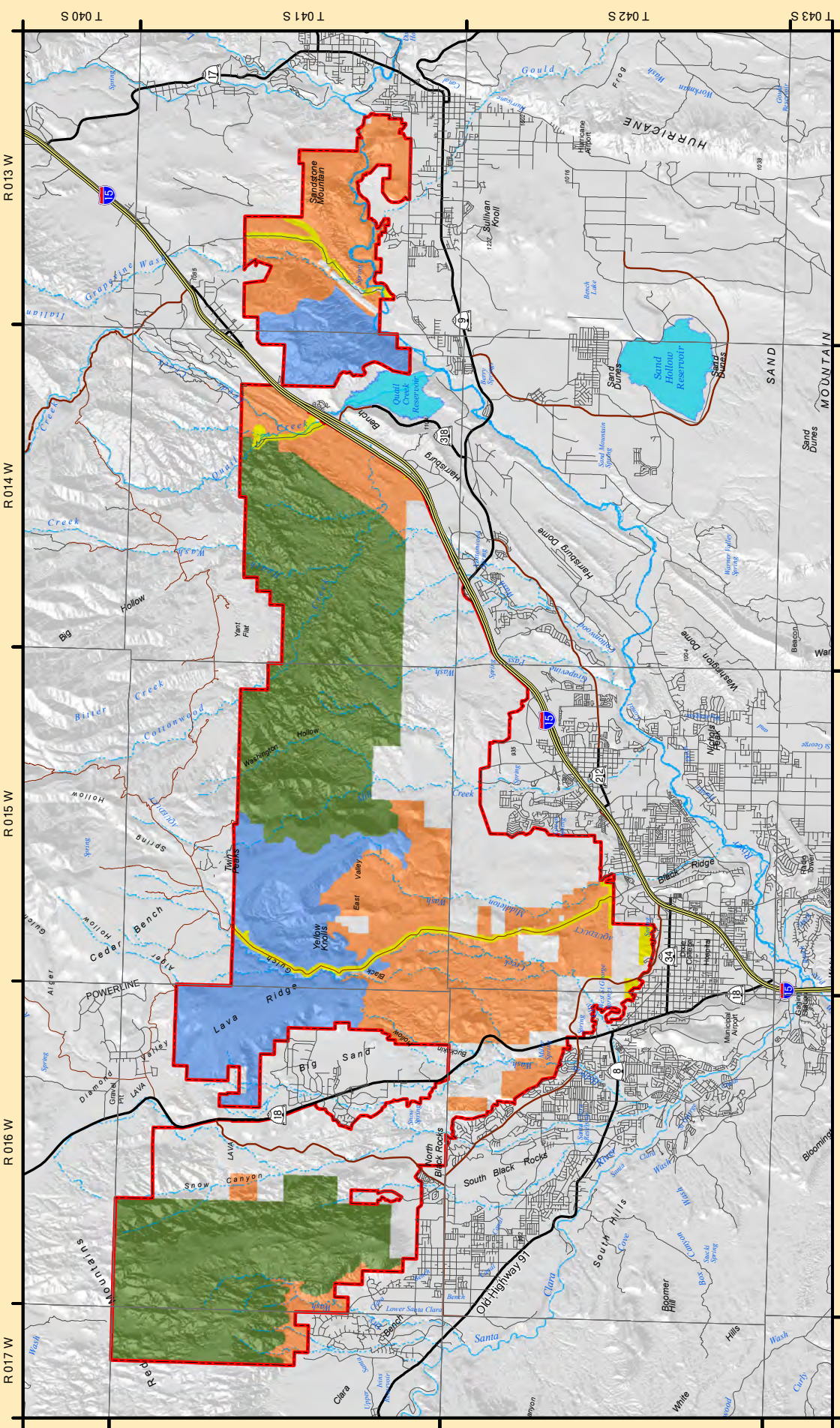
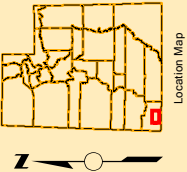
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Special Recreation Management Areas (SRMA) - Red Cliffs NCA - Alternative B

Special Recreation Management Area - Recreation Management Zone

- Red Cliffs SRMA, Rural RMZ
- Red Cliffs SRMA, Frontcountry RMZ
- Red Cliffs SRMA, Primitive RMZ
- National Conservation Area Boundary



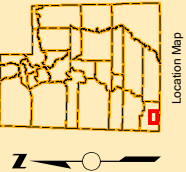
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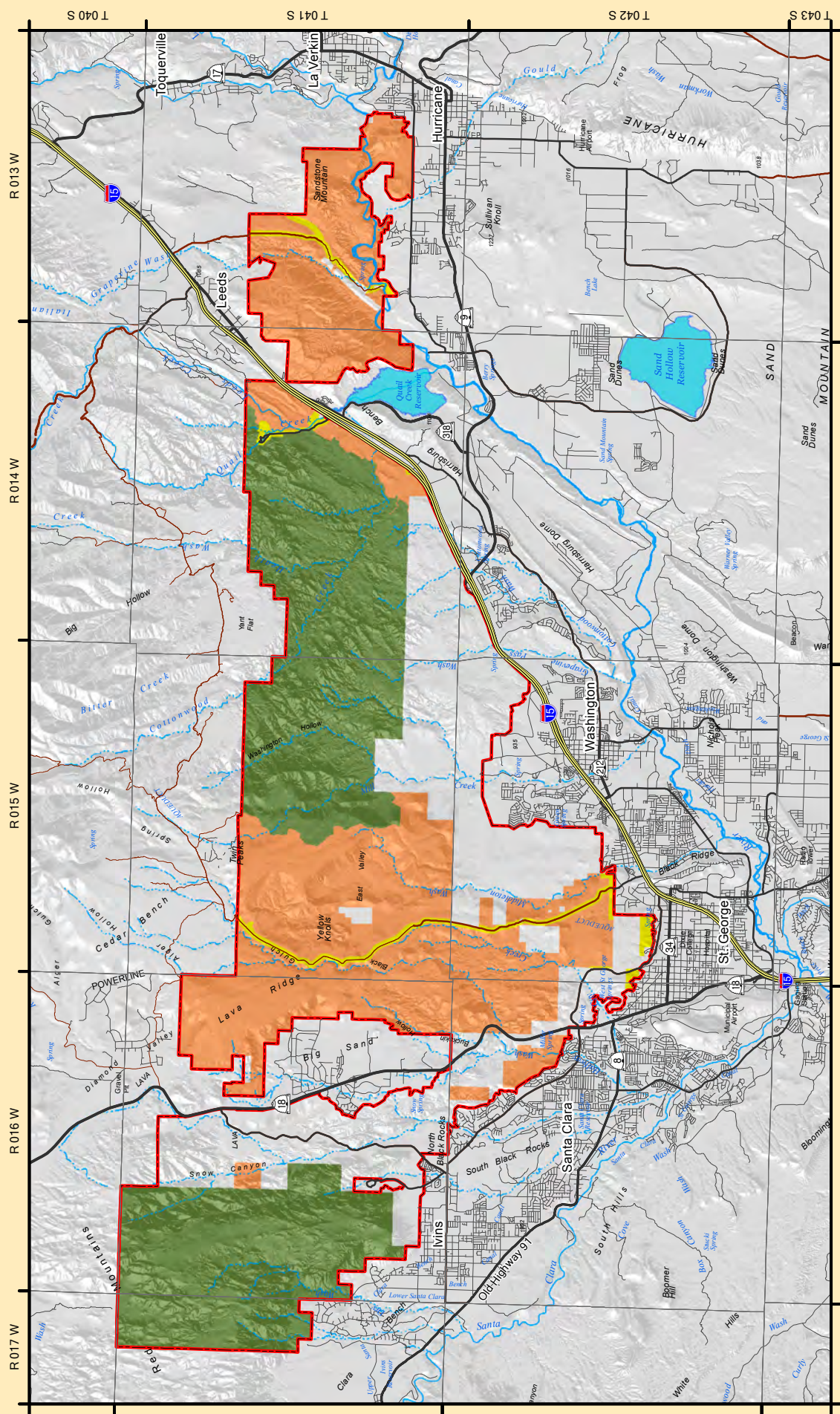
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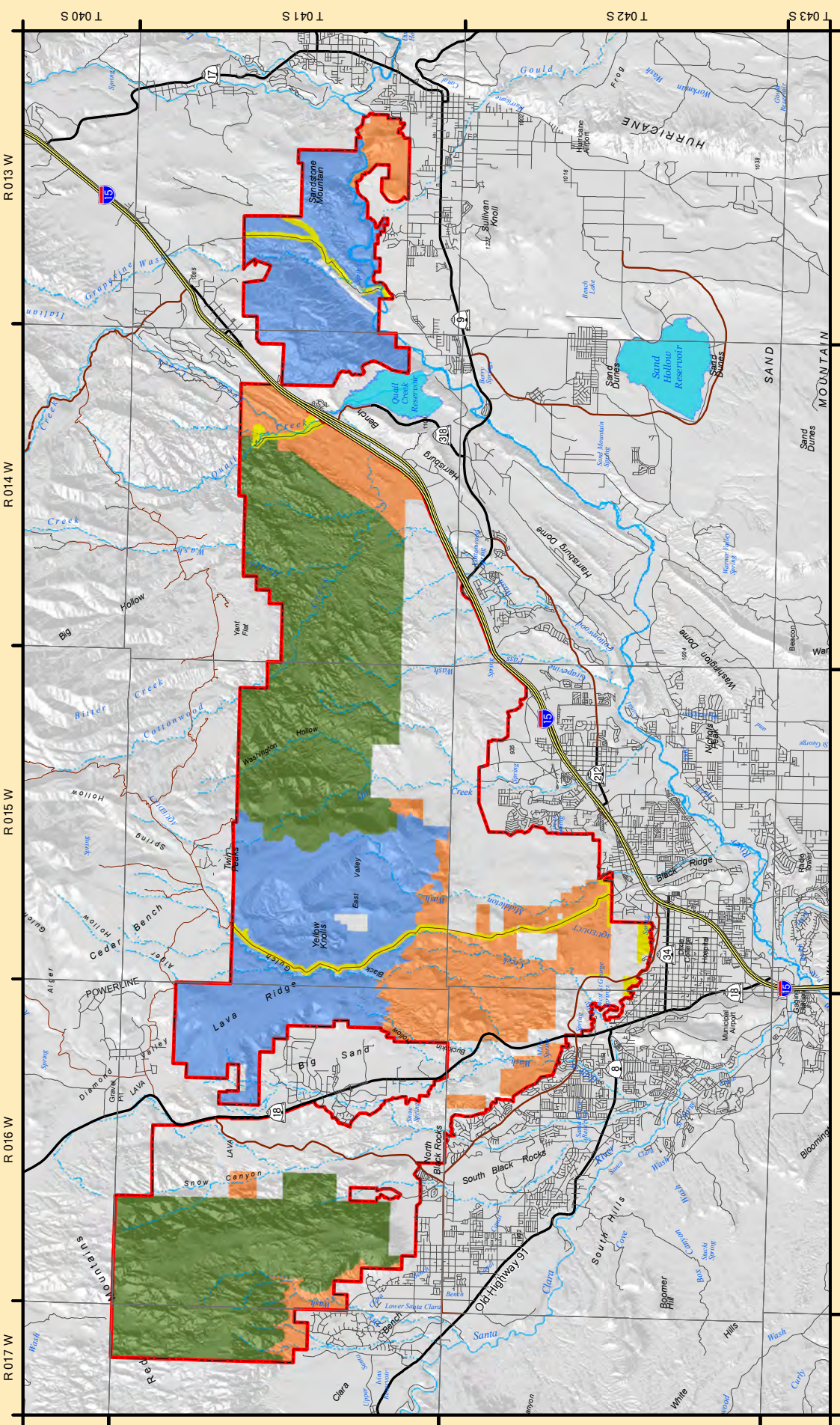
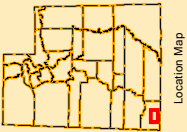
Special Recreation Management Areas (SRMA) - Red Cliffs NCA - Alternative C

Special Recreation Management Area - Recreation Management Zone  
Red Cliffs SRMA, Rural RMZ  
Red Cliffs SRMA, Frontcountry RMZ  
National Conservation Area Boundary



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Special Recreation Management Areas (SRMA) - Red Cliffs NCA - Alternative D

Special Recreation Management Area - Recreation Management Zone  
Red Cliffs SRMA, Rural RMZ  
Red Cliffs SRMA, Frontcountry RMZ  
National Conservation Area Boundary



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Note: Decisions in this document only apply to BLM lands  
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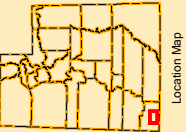




Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	apply to all site improvements, recreational facilities, site fixtures, structures, and associated spaces;  h) Integration of graphic elements such as logos, logo placements, color schemes, quality, and voice across all media to ensure effective recognition and branding for the NCA;  i) Training goals and objectives for staff and volunteers to ensure consistency in interpretive themes and professionalism.		
Scientific Research			
No similar action.	Pursue opportunities for scientific studies that evaluate the effects of diverse recreation activities on the desert environment.		
Implementation Decisions: Red Cliffs SRMA			
The remaining Recreation Management decisions in Table 2-65 are not land-use plan decisions; they are implementation decisions. They address issues that were raised during the planning process and have been included to expose the reader to the general management direction being proposed for the NCA. These decisions provide the framework for the RAMP.			
Recreation Facilities:			
No similar action.	Develop uniform architectural design standards for all site improvements, recreational facilities, site fixtures, structures, and associated spaces developed in the NCA. These standards include construction materials, styles, colors, textures, and interpretive themes.		
No similar action.	Construct site improvements, recreational facilities, site fixtures, structures, and associated spaces in the Rural, Frontcountry, or Backcountry Zones to protect resource values, respond to recreational use demand, and enhance visitor experiences. Developments could include standard and/or expanded amenity fee sites.		
No similar action.	Issue RUPs through the collection of standard or expanded amenity fees for the short-term recreational use of specialized sites or facilities (such as campgrounds and day use sites) which meet fee collection guidelines as provided for in the Federal Lands Recreation Enhancement Act of 2004 or subsequent similar authority.		
Facilities for camping, sanitation, and picnicking at the Baker Dam and Red Cliffs Recreation Areas will be maintained and upgraded as needed to achieve management objectives for safety, resource protection, and quality recreational experiences.	Continue to manage the Red Cliffs Recreation Area as an Expanded and Standard Amenity Fee Site for camping and day use in accordance with the approved Red Cliffs Recreation Area Business Plan.  Maintain, improve, and enlarge facilities for camping, sanitation, or day use (e.g., increased parking, additional vault toilets, campsites) at the Red Cliffs Recreation Area, as needed, to achieve management objectives for public safety, resource protection, and quality recreational experiences.	Manage the Red Cliffs Recreation Area as a Standard Amenity Fee Site for picnicking and day use only by converting existing campsites to day use sites and parking. Revise the Red Cliffs Recreation Area Business Plan to reflect management changes.  Maintain facilities for sanitation, picnicking, and day use in the Red Cliffs Recreation Area, as needed, to achieve management objectives for public safety, resource protection, and quality recreational experiences.	Same as Alternative B.
“This plan designates a primitive campground at Sand Cove (near Sandstone Mountain). Camping at this popular group site shall require a permit issued by the	Same as Alternative A.	Close the Sand Cove Primitive Camping Area to overnight camping.	Same as Alternative A.

Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
appropriate Reserve Manager. In the future, primitive facilities may be installed to service the area (e.g. a sanitary toilet) and a use fee may be charged to support facility maintenance.” (PUP 2001).			
No similar action.	Develop camping facilities at the Sand Cove Primitive Camping Area, limited to designated walk-in campsites. Each campsite would include, but is not limited to:  a) A visible marker that clearly delineates the location as a designated campsite;  b) A metal campfire container.	No camping facilities would be developed at the Sand Cove Primitive Camping Area.	Develop camping facilities at the Sand Cove Primitive Camping Area. Development would include:  a) A visible marker that clearly delineates the location as a designated campsite;  b) A metal campfire container;  c) A vault toilet;  d) Vehicle access improvements;  e) A kiosk for displaying interpretive and regulatory information.
No similar action.	Limit camping at the Sand Cove Primitive Camping Area to one permit per day with a maximum group size of 20. All groups would be required to camp in designated sites and haul out all trash and human waste.	Close the Sand Cove Primitive Camping Area to overnight camping.	Limit camping at the Sand Cove Primitive Camping Area to one permit per day with a maximum group size of 40. All groups would be required to camp in designated sites and haul out all trash.
<i>Dispersed Camping:</i>			
“Upland Zone: Camping is allowed within the Upland Zone. In the Babylon/Sandstone Mountain area, camping is restricted to the Sand Cove primitive campground. In addition, this plan envisions a designated campground near the Virgin River close to the Babylon mill site. At this time, camping in other areas of the Upland Zone is not restricted to designated sites. However, Reserve managers anticipate that as use in the Reserve increases, a transition to designated camping is likely to occur throughout the zone. When necessary, consistent	Prohibit dispersed camping in the Rural and Frontcountry Zones ( <b>Map 2-37, Map 2-38, and Map 2-39</b> ).  Develop a limited number of designated undeveloped dispersed campsites in the Backcountry Zone and limit camping to these sites. Each campsite would include, but is not limited to:  a) A visible marker that clearly delineates the location as a designated campsite;  b) A metal campfire container.  Allow dispersed camping in	Prohibit dispersed camping in the Rural and Frontcountry Zones ( <b>Map 2-37, Map 2-38, and Map 2-39</b> ).  Prohibit dispersed camping in the Backcountry Zone.  Allow dispersed camping in the Primitive Zone, except within 1 mile of the Red Cliffs Recreation Area developed campground and within 300 feet of water sources.	Prohibit dispersed camping in the Rural and Frontcountry Zones ( <b>Map 2-37, Map 2-38, and Map 2-39</b> ).  Allow dispersed camping in the Backcountry Zone.  Allow dispersed camping in the Primitive Zone, except within 1 mile of the Red Cliffs Recreation Area developed campground and within 300 feet of water sources.



Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
with the goals of the HCP and this plan, Reserve managers may designate suitable areas for camping in high-use areas and restrict camping to these sites.” (PUP 2001).  (Map 2-36)	the Primitive Zone, except within 1 mile of the Red Cliffs Recreation Area developed campground and within 300 feet of water sources.		
No similar action.	Provide public education on minimum impact camping through a variety of on- and off-site media.		
“In the Lowland Zone of the Reserve, campfires are restricted to established fire rings within official campgrounds. In the Upland Zone, which is dominated by pinyon-juniper habitat, campfires are allowed subject to closures for high fire danger.” (PUP 2001).	Allow campfires within the provided metal campfire container at designated campsites and/or developed campgrounds in the Rural, Frontcountry, and Backcountry Zones.  Allow dispersed campfires outside of a metal campfire container in the Primitive Zone.	Allow campfires within the provided metal campfire container at designated campsites and/or developed campgrounds in the Rural and Frontcountry Zones.  Prohibit dispersed campfires outside of a metal campfire container in the Backcountry and Primitive Zones.	Allow campfires within the provided metal campfire container at designated campsites and/or developed campgrounds in the Rural and Frontcountry Zones.  Allow dispersed campfires outside of a metal campfire container in the Backcountry and Primitive Zones.
<i>Non-Motorized Trails:</i>			
“Public lands within the Red Mountain and Cottonwood Wilderness Study Areas (WSA) are closed to mountain bike use by the BLM’s Resource Management Plan for the St. George Field Office, March 1999...Most trails in the Reserve are shared-use, so trail etiquette must be used.” (PUP 2001).	Design and construct the non-motorized trail system to the professional standards outlined in Appendix I to ensure that trail design:  a) Addresses the needs of equestrians, hikers, climbers, and mountain bikers;  b) Protects diverse NCA resource values from direct or indirect recreation impacts by promoting compliance with regulatory requirements and visitor use restrictions;  c) Results in sustainable systems;  d) Provides high quality experiences;  e) Serves the abilities of non-motorized recreational users;  f) Offers opportunities for looping, varying distances, linking between geographic areas and trailheads, and connecting to heritage and other educational resources;  g) Minimizes user conflicts by separating user groups whenever feasible;  h) Limits the desire to venture off-trail.		
“Unless new information has come to light, we do not believe that new trails should be considered or reconsidered. Most of the proposed changes from the recreational community will be requests for additional trails or trail reroutes which were discussed at great length over more than 18 months of meetings. Requesting that these trails (most of which will have been purposefully excluded from the original PUP) be added because there is a process to	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative B.	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative C.	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative D.

Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
do so will not be well-received by the Service.” (USFWS ES/6-UT-01-F-003 2001).			
No similar action.	Where new trail development would result in surface disturbance in designated critical habitats, restore acreage of similar quality habitat at a 1:1 ratio. Restoration methods and adequacy would be determined by BLM in consultation with USFWS.  Such methods could include, but are not limited to, reclamation and re-vegetation with approved native species or native species cultivars on linear disturbances, fire-damaged lands, or other disturbed areas.	Where new trail development would result in surface disturbance in designated critical habitats, restore acreage of similar quality habitat at a 2:1 ratio. Restoration methods and adequacy would be determined by BLM in consultation with USFWS.  Such methods could include, but are not limited to, reclamation and re-vegetation with approved native species or native species cultivars on linear disturbances, fire-damaged lands, or other disturbed areas.	Same as Alternative B.
<i>Commercial SRPs:</i>			
No similar action.	Limit SRPs for recreation activities to 10% of overall visitation (overall visitation is defined as the total number of all visits: commercial and non-commercial, motorized and non-motorized).	Same as Alternative B.	Limit SRPs for recreation activities to 20% of overall visitation.
No similar action.	Limit SRPs for motorized recreation activities (e.g., Motor Coach tours, OHV tours, motorcycle tours, ATV Jamborees) to roads and primitive roads authorized for use by the public.		
No similar action.	Set group size limits for SRPs on a case-by-case basis. Factors for the determination of limits would include, but are not limited to: type of activity, type of transportation, length of stay, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.	All SRPs would be limited to a group size of 15, including guides.	Same as Alternative B.
<i>Competitive SRPs:</i>			
“Organized competitive and recreational sporting events found to be low-impact to habitat are only permitted in the Reserve with a special use permit issued by the BLM or State Parks in coordination with the HCP Administrator. An organized recreational activity is any scheduled event	SRPs for competitive running and bicycling events could be authorized on roads in the NCA if they meet the following criteria:  a) Event staging takes place outside the NCA or takes place on designated roads and/or at trailheads inside the NCA;	Do not authorize SRPs for competitive non-motorized events in the NCA.	Same as Alternative B.

Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
with a specific planned purpose. Those organized recreational activities which conflict with the intended protection of the desert tortoise or, due to the nature of the event, are unable to provide the degree of supervision necessary to prevent harm to desert tortoises or prevent damage to habitat will not be permitted within the Reserve. These activities and events should generally be staged on designated roads only. Monitoring for previous-use impacts, habitat density and quality, numbers of spectators and participants, and time of year will all be factors in the decision to issue/re-issue a permit.” (PUP 2001).	b) The event causes no new surface disturbance;  c) Event scheduling complies with seasonal restrictions to protect wildlife and habitats, (e.g., restrictions on events during desert tortoise active season, generally between March 15 and October 15).		
No similar action.	Group size limits for competitive non-motorized events would be set on a case-by-case basis. Factors for the determination of limits could include, but are not limited to: type of event, length of event, number of participants, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.	Do not authorize SRPs for competitive non-motorized events in the NCA.	Same as Alternative B.
No similar action.	SRPs for competitive equestrian events would not be authorized in the NCA.		
No similar action.	SRPs for competitive motorized events would not be authorized in the NCA.		
Organized Groups:			
“Activities such as hot air ballooning, family reunions, other social functions (including weddings), or compatible activities which are not listed above require a special use permit if conducted within (or above) the Reserve. Reserve managers will review the activity before a permit is granted.” (PUP 2001).	Authorize SRPs for organized groups (e.g., scouting events, church events, school classes, historical reenactments) on a case-by-case basis, if the proposed event conforms to an implementation-level Interpretive Master Plan, when developed (see Public Education and Interpretation below).  Group size for organized groups would be set on a case-by-case basis. Factors for the determination of limits	Do not authorize SRPs for organized groups (e.g., scouting events, church events, school classes, historical reenactments) in the NCA.	Same as Alternative B.

Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	could include, but are not limited to: type of activity, type of transportation, number of participants, length of stay, potential for resource impacts, potential for impacts to other visitors, and compatibility with RMZs.		
No similar action.	Handcarts, buggies, wagons, or other animal-drawn vehicles would be limited to travel on roads and routes designated through the approved TMP in the Rural, Frontcountry, and Backcountry Zones. All proposed activities (e.g., historical reenactments) would require an SRP or a letter of authorization from the NCA Manager.	No similar action.	Handcarts, buggies, wagons, or other animal-drawn vehicles would be limited to travel on roads and routes designated through the approved TMP in the Rural, Frontcountry, and Backcountry Zones. All proposed activities (e.g., historical reenactments) would require an SRP or a letter of authorization from the NCA Manager.
<i>Rock Climbing:</i>			
“Within the Red Cliffs Desert Reserve there are three areas where authorized rock climbing and rappelling activities occur: Snow Canyon State Park, Paradise Canyon, and Pioneer Park. Climbing and rappelling outside of designated areas is prohibited.” (PUP 2001).  (Map 2-40)	Continue to manage the existing climbing area within the NCA.		
No similar action.	Allow climbing anywhere in the Primitive Management Zone.		
No similar action.	Designate one new climbing area, Sandstone Mountain (Map 2-41).	No new climbing areas would be authorized (Map 2-40).	Same as Alternative B (Map 2-41).
No similar action.	Develop a Climbing Management Plan as part of the RAMP. The plan would:  a) Identify areas where climbing would be authorized;  b) Identify potential climbing restrictions such as group size limits or seasonal closures;  c) Establish monitoring protocols to identify resource impacts;  d) Establish procedures for authorizing new climbing areas.  All authorized climbing areas would remain open until the Climbing Management Plan is complete.		



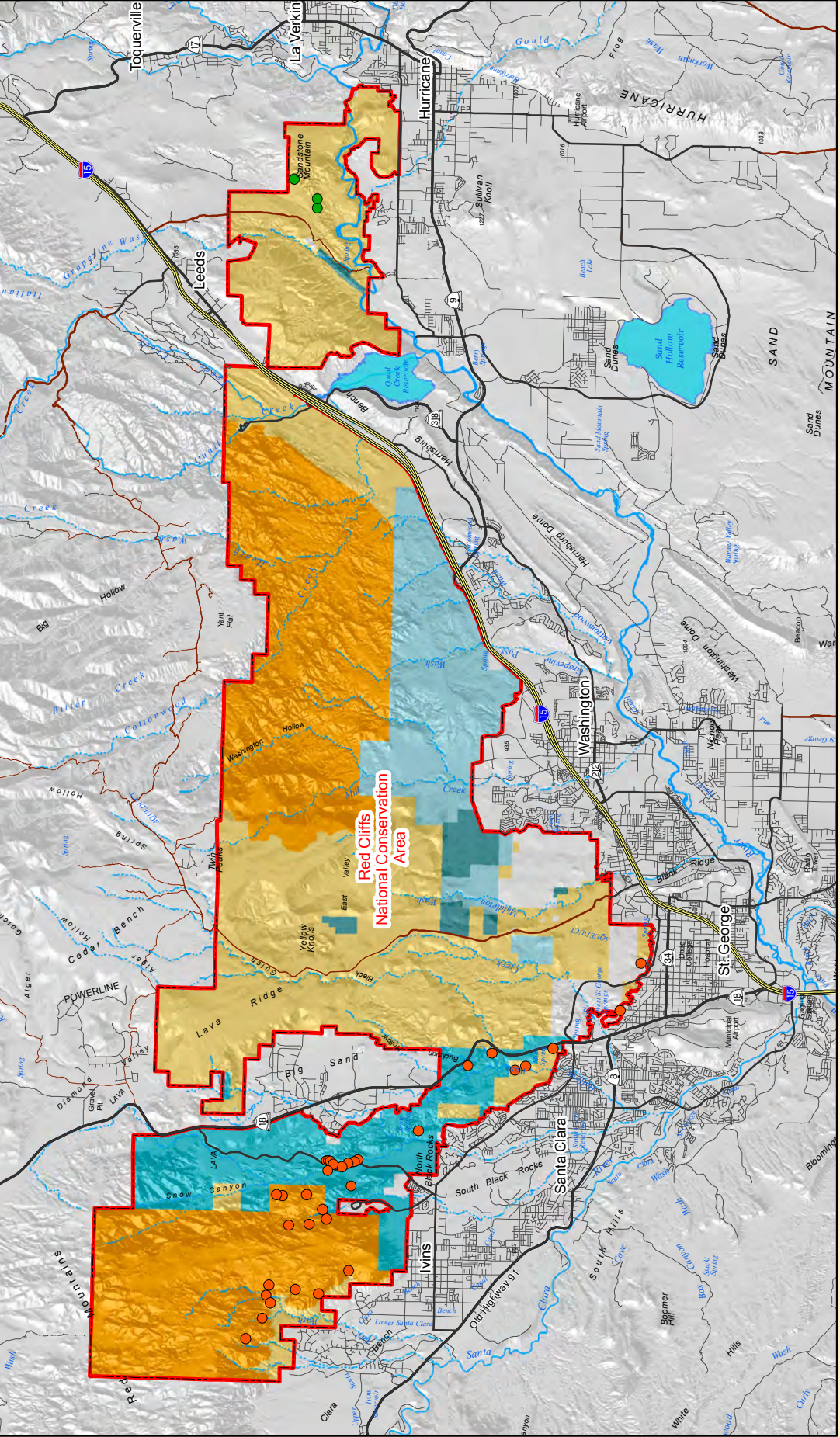
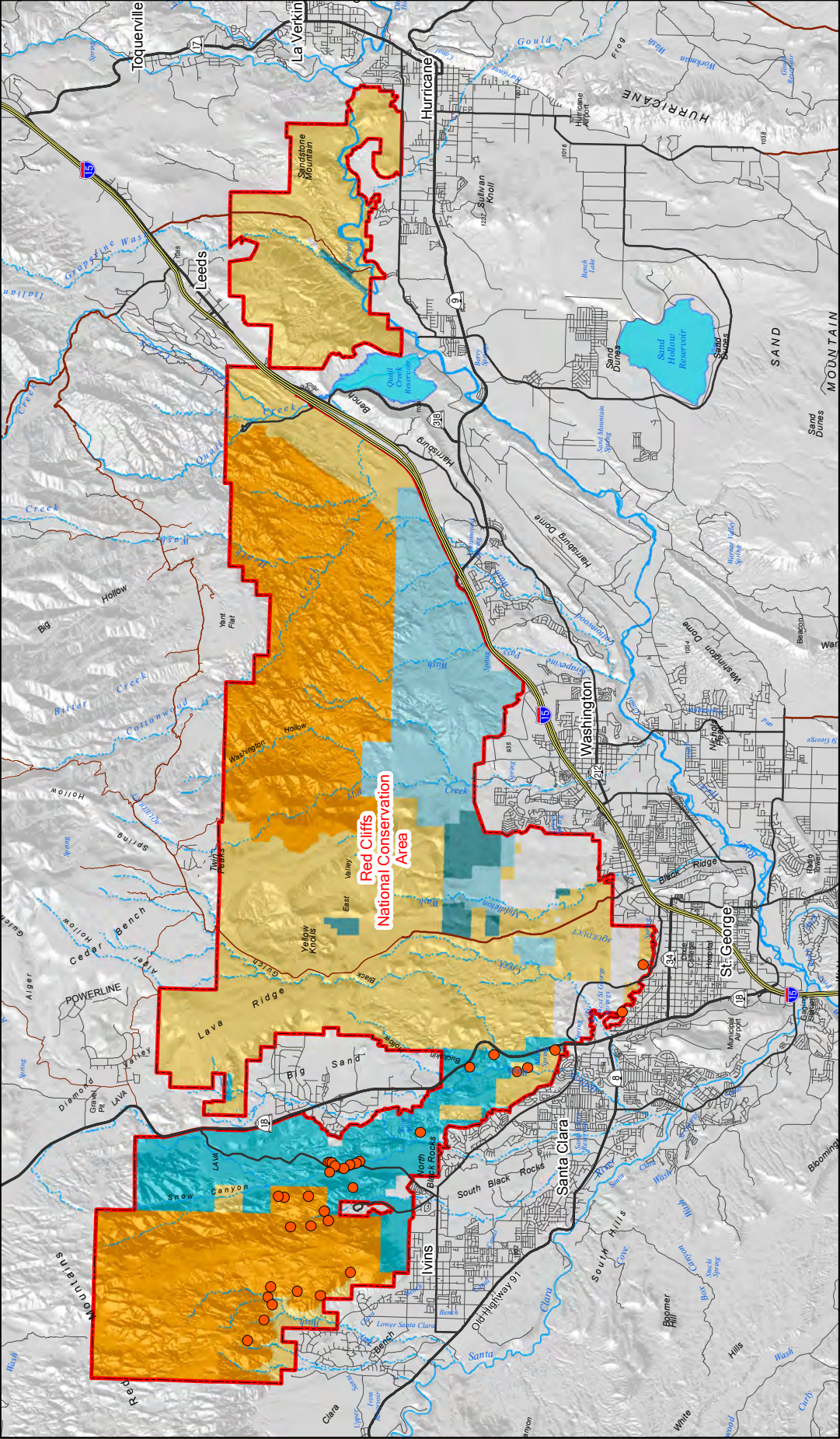




Table 2-65 Recreation and Visitor Services			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Other Recreational Uses:			
“All geocaches and letter boxes located or proposed to be located within the boundaries of the Red Cliffs Desert Reserve shall have written approval from either the Washington County HCP administration, Snow Canyon state park manager, or applicable reserve manager prior to placement.” (Washington County Ordinance 7-2-6)	Prohibit physical geocaches in the Frontcountry and Primitive Zones. Allow physical geocaches in the Rural and Backcountry Zones. Allow virtual geocaches in all RMZs provided they are compliant with other zone restrictions. Approval from authorized NCA staff would be required prior to any physical geocache placement. Approval from authorized NCA staff would be required prior to the public posting of any virtual geocache placement.		
No similar action	Prohibit the take-off and landing of powered parachutes in the NCA.		
No similar action	Prohibit the take-off and landing of remote-controlled aircraft in the NCA.		
No similar action.	Casual rock collection, including the gathering of mineral specimens and rock hounding, would be allowed under the following criteria: a) Collect using hand tools; b) Only collect specimens for personal use.	Prohibit casual rock collection in the NCA.	Same as Alternative B.
No similar action.	Prohibit all recreational metal detecting activities.		Allow recreational metal detecting that creates only minimal surface disturbance.
Monitoring:			
No similar action.	Develop a comprehensive program for monitoring recreational impacts in the NCA as part of the RAMP. The program would focus primarily on the identification of illegal trails and would include a progression of appropriate management actions.		

Table 2-66 Recreation Management Zone Descriptions

Table 2-66 Recreation Management Zone Descriptions
<b>RURAL ZONE</b>
<ul style="list-style-type: none"><li>• Located adjacent to the urban interface, along heavily trafficked roads, and around high use trailheads.</li><li>• Accommodates the highest number of visitors.</li><li>• Largest number of management controls including directional, educational, and regulatory signs.</li><li>• Frequent BLM staff presence.</li><li>• Regular law enforcement patrols.</li><li>• Significant amount of infrastructure; includes all roads, trailheads, and parking areas.</li><li>• Off-road motorized use is restricted to administrative and emergency purposes only.</li><li>• Smallest zone. Does not vary in size by alternative.</li></ul>
<b>FRONTCOUNTRY ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from Rural Zone trailheads.</li><li>• Accommodates a large number of visitors.</li><li>• Large number of management controls consisting primarily of directional, educational, and regulatory signs.</li><li>• BLM staff presence is consistent but less than the Rural Zone.</li><li>• Law enforcement patrols are irregular and often based on incident or emergency response.</li><li>• Motorized use is restricted to administrative purposes only.</li><li>• Non-motorized use is restricted to designated trails.</li><li>• Majority of zone is within designated critical tortoise habitat.</li><li>• Varies in size by alternative</li></ul>
<b>BACKCOUNTRY ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from the Rural Zone trailheads or Frontcountry Zone trails.</li><li>• Less recreational use than the Frontcountry Zone, but still accommodates a significant number of visitors.</li><li>• Fewer management controls consisting primarily of directional and regulatory signs.</li><li>• BLM staff presence is infrequent and generally based on project-specific need.</li><li>• Law enforcement patrols generally limited to incident and emergency response.</li><li>• Motorized use is restricted to administrative purposes.</li><li>• Non-motorized use is restricted to designated trails.</li><li>• Majority of zone is outside critical desert tortoise habitat.</li><li>• Varies in size by alternative</li></ul>
<b>PRIMITIVE ZONE</b>
<ul style="list-style-type: none"><li>• Accessed from the Rural, Frontcountry, or Backcountry Zones. Boundary corresponds with designated wilderness, except in Alternative C.</li><li>• Accommodates a varying number of visitors depending on location.</li><li>• Limited management controls consisting primarily of directional and regulatory signs located on and around the wilderness boundary.</li><li>• BLM staff presence is very low.</li><li>• Law enforcement presence limited to emergency response.</li><li>• Motorized and mechanized use prohibited except for emergency response.</li><li>• Cross-country travel is allowed. All visitors must be on foot or horseback.</li><li>• No constructed or maintained trails, but popular primitive routes are displayed on visitor maps.</li><li>• Majority of this zone is outside critical tortoise habitat.</li><li>• Does not vary in size by alternative, except for Alternative C.</li></ul>



Table 2-67 Comprehensive Travel and Transportation Management

Table 2-67 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Compatible traditional, current, and future use of the land is sustained by establishing a transportation system that contributes to protection of sensitive resources, promotes dispersed recreation, and minimizes user conflicts.  A high quality, sustainable transportation system that provides appropriate public and administrative access is developed and maintained to conserve, protect, and enhance the resource values of the NCA.		
<b>Objectives</b>			
It is BLM’s objective to continue to work closely with Washington County officials to ensure that use and enjoyment of existing roads and trails is permitted under safe and prudent conditions and that responsibility for maintenance is properly defined in road maintenance agreements or other appropriate documents. It is also BLM’s objective to work with municipalities, Washington County, the Utah Department of Transportation, and other affected parties in defining and planning for future transportation needs, locating environmentally compatible route Alternative, and resolving land use conflicts related to transportation systems where public lands are involved.	Provide a well-maintained and functional motorized transportation system that provides public access to recreational opportunities and is consistent with goals, objectives, and recommendations of the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).  Provide a functional motorized administrative transportation system that is consistent with goals, objectives, and recommendations of <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011) and provides the minimum access necessary to authorized infrastructure and valid ROWs.  Provide a nationally recognized, professionally designed, non-motorized trail system that provides access to a wide range of recreational opportunities and is consistent with the goals, objectives, and recommendations of the <i>Revised Recovery Plan for the Mojave Desert Tortoise</i> (USFWS 2011).		
<b>Management Guidance Common To All Alternatives</b>			
The BLM would coordinate transportation management with adjacent federal agencies, state and local governments, and authorized users.			
All motorized routes identified in the PUP, subsequent implementation-level plans, and subsequent project-specific NEPA documents are carried forward into the TMP.			
<b>Management Actions</b>			
(For Non-motorized Transportation Management Actions See Table 2-65 Recreation and Visitor Services)			
<i>OHV Area Designations:</i>			
Approximately 24,870 acres will be Limited to Designated Roads and Trails. A map of the existing transportation system can be found at <a href="http://www.blm.gov/nxld">www.blm.gov/nxld</a> .			
Open to Cross-Country OHV use: 0 acres			
Limited to Designated Roads and Trails: 24,870 acres			
Closed to OHV use: 19,989 acres			
(SGFO RMP Map 2.13)			
(Map 2-42)			

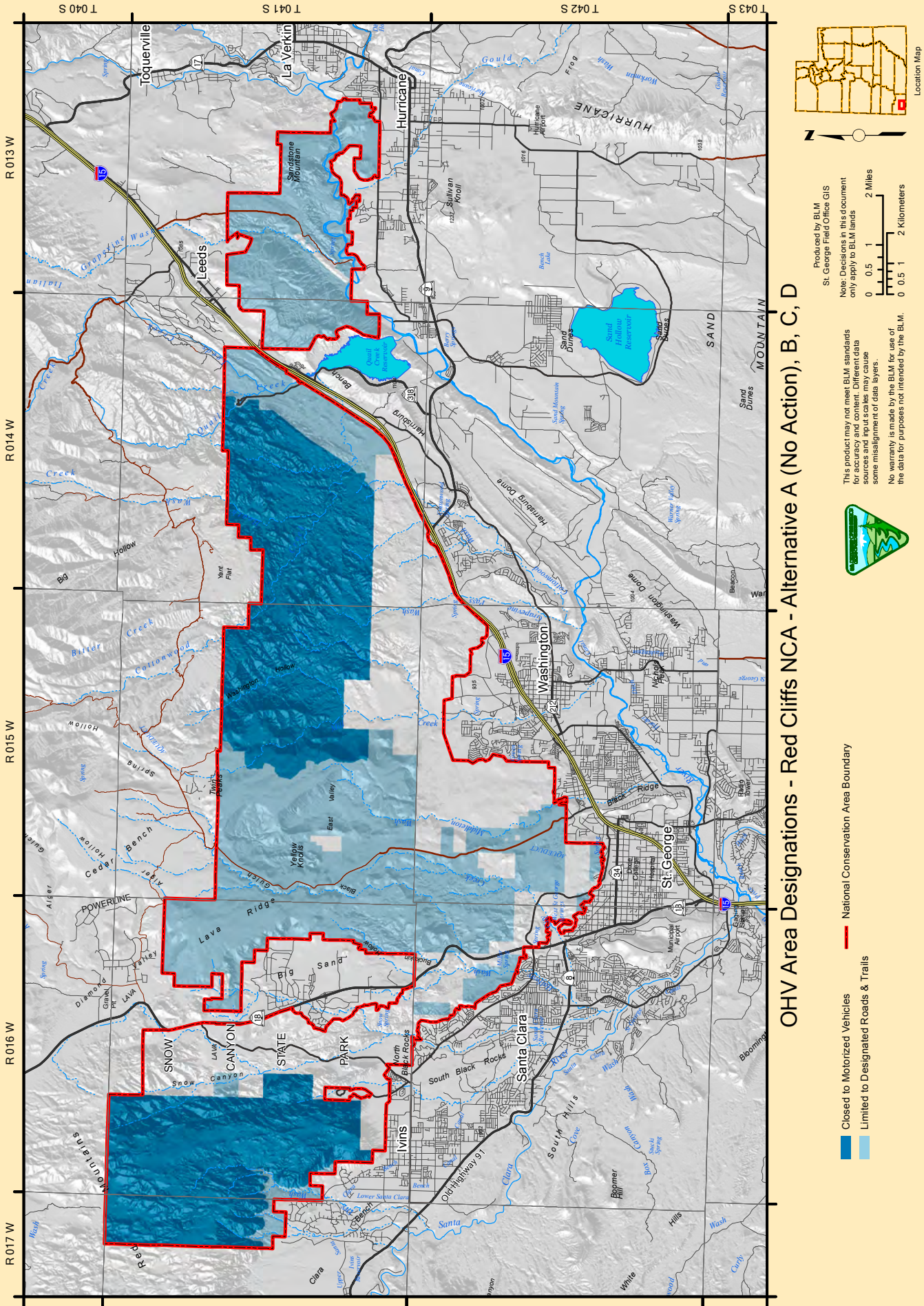




Table 2-67 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Non-Motorized Trails:</i>			
“Public lands within the Red Mountain and Cottonwood Wilderness Study Areas (WSA) are closed to mountain bike use by the BLM’s Resource Management Plan for the St. George Field Office, March 1999...Most trails in the Reserve are shared-use, so trail etiquette must be used.” (PUP 2001).	Design and construct the non-motorized trail system to professional standards to ensure that trail design: a) Addresses the needs of equestrians, hikers, climbers, and mountain bikers; b) Protects diverse NCA resource values from direct or indirect recreation impacts by promoting compliance with regulatory requirements and visitor use restrictions; c) Results in sustainable systems; d) Provides high quality experiences; e) Serves the abilities of non-motorized recreational users; f) Offers opportunities for looping, varying distances, linking between geographic areas and trailheads, and connecting to heritage and other educational resources; g) Minimizes user conflicts by separating user groups whenever feasible; h) Limits the desire to venture off-trail.		
“Unless new information has come to light, we do not believe that new trails should be considered or reconsidered. Most of the proposed changes from the recreational community will be requests for additional trails or trail reroutes which were discussed at great length over more than 18 months of meetings. Requesting that these trails (most of which will have been purposefully excluded from the original PUP) be added because there is a process to do so will not be well-received by the Service.” (USFWS ES/6-UT-01-F-003 2001).	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative B.	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative C.	Construct new trails in the Rural, Frontcountry, or Backcountry Zones, as shown in the TMP for Alternative D.
No similar action.	Where new trail development would result in surface disturbance in designated critical habitats, restore acreage of similar quality habitat at a 1:1 ratio. Restoration methods and adequacy would be determined by BLM in consultation with USFWS. Such methods could include, but are not limited to, reclamation and re-vegetation with approved native species or native species cultivars on linear disturbances, fire-damaged lands, or other disturbed areas.	Where new trail development would result in surface disturbance in designated critical habitats, restore acreage of similar quality habitat at a 2:1 ratio. Restoration methods and adequacy would be determined by BLM in consultation with USFWS. Such methods could include, but are not limited to, reclamation and re-vegetation with approved native species on linear disturbances, fire-damaged lands, or other disturbed areas.	Same as Alternative B.

Table 2-67 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Public Education and Interpretation</b>			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public lands etiquette, including OHV etiquette.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that encourage motorized users to use existing disturbed areas for parking and camping.		

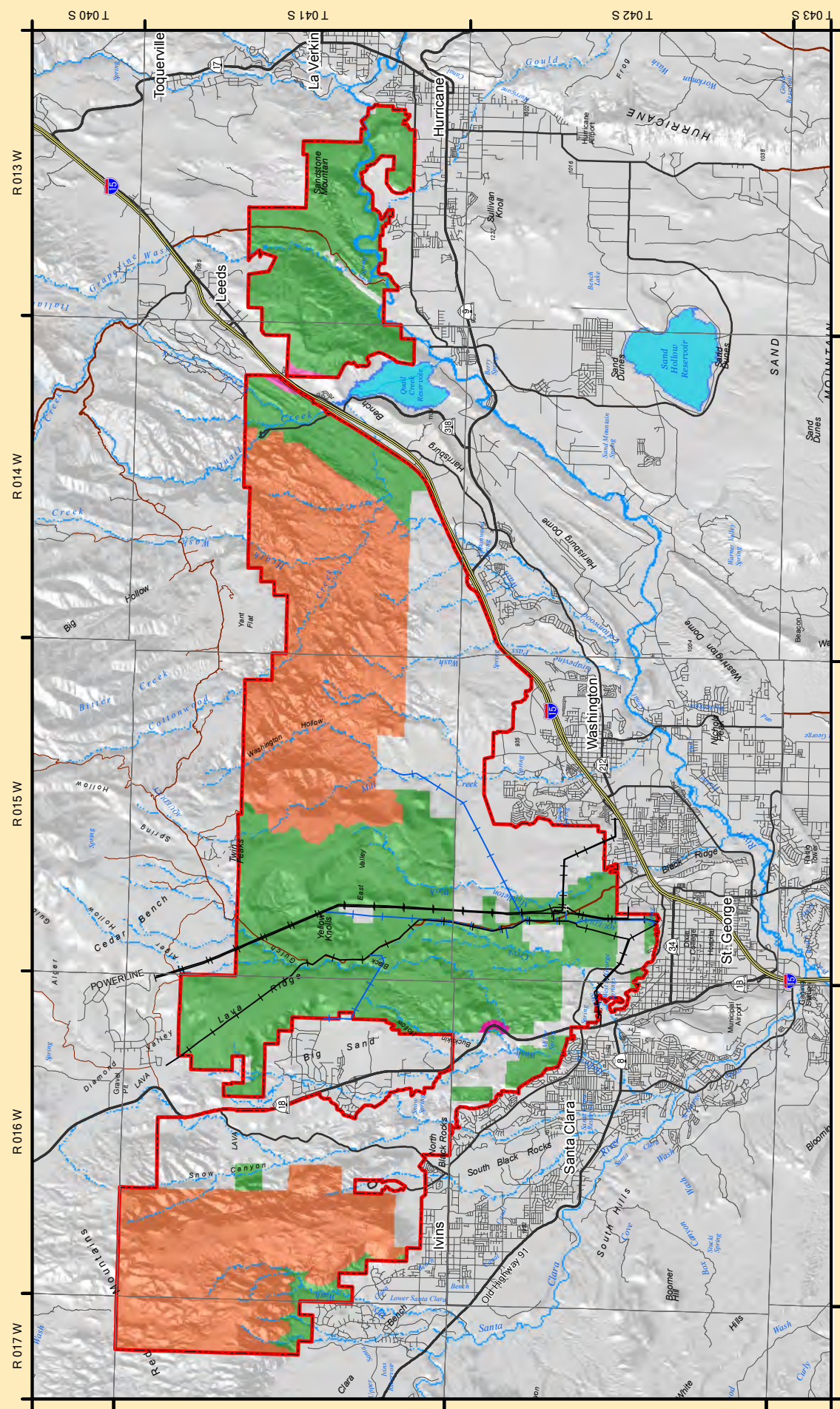


Table 2-68 Lands and Realty

Table 2-68 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Land tenure adjustments are made to assist the conservation, protection, and enhancement of NCA resource values, facilitate management, and reduce administrative costs.  Land use authorizations further the purposes of conservation, protection, and enhancement of resource values in the NCA.		
<b>Objectives</b>			
In accordance with national policy, BLM will retain lands within its administration except where necessary to accomplish important objectives outlined in resource sections throughout this Plan. BLM will transfer lands out of federal ownership or acquire non-federal lands where needed to accomplish important resource management goals or to meet essential community needs.	Non-federal lands are acquired from willing land owners through purchase, exchange or donation.  Surface and subsurface rights would be acquired whenever possible to avoid creating split estates.  Conservation easements may be acquired where such interest would further the management objectives of the NCA.  Land tenure adjustments would be prioritized based on manageability, the feasibility of successful acquisition, and the ecological, cultural, recreational, and scenic values of the tract to be acquired.  Ensure that long and short term land use authorizations are consistent with the NCA purposes of resource conservation, protection, and enhancement.		
<b>Management Guidance Common to All Alternatives</b>			
“Any land or interest in land that is located in the National Conservation Area that is acquired by the United States shall—(1) become part of the National Conservation Area; and (2) be managed in accordance with—(A) the Federal Land Policy and Management Act of 1976 (USC 1701 et seq.); (B) this section; and (C) any other applicable law (including regulations)” (OPLMA Section 1974 (f)).			
“(1) In General.—Subject to valid existing rights, all Federal land located in the National Conservation Area is withdrawn from—(A) all forms of entry, appropriation, and disposal under the public land laws; (B) location, entry, and patenting under the mining laws; (C) operation of the mineral leasing, mineral materials, and geothermal leasing laws. (2) Additional Land.—If the Secretary acquires additional land that is located in the National Conservation Area after the date of enactment of this Act, the land is withdrawn from operation of the laws referred to in paragraph (1) on the date of acquisition of the land” (OPLMA Section 1974 (g)).			
Manage public lands in accordance with applicable city and county zoning restrictions and municipal ordinances (to the extent that such restrictions and ordinances are consistent with the purposes for which the NCA was Congressionally-designated), as well as other federal laws, regulations, and policies, and with goals, objectives, and management decisions from the approved RMP for the NCA.			
Do not authorize commercial renewable energy (e.g., wind, solar) leases or ROWs in the NCA.			
Existing ROWs will be maintained in accordance with the respective ROW grant or other applicable authorization.			
<b>Management Actions</b>			
<i>Land Tenure Adjustments:</i>			
BLM will acquire selected non-federal lands, with owner consent, for such purposes as ensuring public access to key use areas, consolidating public ownership of lands critical to recovery of species listed under the Endangered Species Act, providing essential public recreation	Work with willing land owners or administrators to acquire in-holdings and edge-holdings that are in the public interest through purchase, exchange of public lands targeted for disposal outside of the NCA boundaries, donation, or conservation easement.  Acquire both surface and subsurface rights whenever possible to avoid the creation of split estates. Prioritize acquisition of non-federal inholdings and parcels that adjoin the NCA boundaries that meet one or more of the following criteria:  a) Further the purposes of the NCA relating to the conservation, protection, and enhancement of its ecological, scenic, wildlife, cultural, historical, natural, educational, and scientific resources;		

Table 2-68 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<p>opportunities, protecting floodplains, riparian areas, wildlife habitat, cultural sites, and wilderness, and meeting the mutually agreed upon objectives of local, state, and federal plans or programs. Although most acquisitions will occur through exchange, they may also be made through purchase, donation, or conservation easement.</p> <p>Over the life of the Plan, it is expected that BLM may acquire up to 18,000 acres of land within Washington County. Nearly all of these acres will result from BLM fulfilling its commitment to acquire available state and private lands within the Washington County Habitat Conservation Plan (HCP) Reserve and to fulfill existing statewide exchange agreements with the Utah School and Institutional Trust Land Administration to remove trust inholdings from within federally reserved areas.</p>	<p>b) Enhance public recreation experiences and benefits;</p> <p>c) Provide additional access to other public lands.</p>		
<i>Linear ROWs:</i>			
<p>Avoidance areas: Washington County HCP Reserve. (SGFO RMP Table 2-3)</p> <p>Avoidance area: 24,686 acres</p> <p>Exclusion area: 19,989 acres (Designated Wilderness)</p> <p>Designated ROW Corridor: 183 acres (State Route 18 and I-15, SGFO RMP Table 2-2 and Map 2.5)</p> <p>(Map 2-43)</p> <p>New ROWs will be granted in Avoidance areas only when feasible alternative routes or designated corridors are not available.</p> <p>New ROWs will be granted in Exclusion areas only when required by law or federal court action.</p>	<p>Designate ROW Avoidance and Exclusion areas, including Designated Corridors, as follows (Map 2-44):</p> <p>Avoidance area: 3,652 acres</p> <p>Exclusion area: 41,023 acres</p> <p>Designated ROW Corridor: 183 acres (State Route 18 and I-15)</p> <p>Do not designate new corridors for linear ROWs (e.g., utility, transportation) in the NCA.</p> <p>New ROWs will be granted in Exclusion areas only when required by law or federal court action.</p>	<p>Designate ROW Avoidance and Exclusion areas, including Designated Corridors, as follows (Map 2-45):</p> <p>Avoidance area: 0 acres</p> <p>Exclusion area: 44,808 acres</p> <p>Designated ROW Corridor: 50 acres (State Route 18)</p> <p>Do not designate new corridors for linear ROWs (e.g., utility, transportation) in the NCA.</p> <p>New ROWs will be granted in Exclusion areas only when required by law or federal court action.</p>	<p>Designate ROW Avoidance and Exclusion areas, including Designated Corridors, as follows (Map 2-46):</p> <p>Avoidance area: 0 acres</p> <p>Exclusion area: 38,324 acres</p> <p>Designated ROW Corridors: 6,534 acres</p> <p>New ROWs will be granted in Exclusion areas only when required by law or federal court action.</p>





Rights of Way Avoidance & Exclusion Areas - Red Cliffs NCA - Alternative A (No Action)

- ROW Designation**
- ROW Corridor
  - Avoidance
  - Exclusion
- RCNCA Powerlines**
- Major
  - Minor
- National Conservation Area Boundary**

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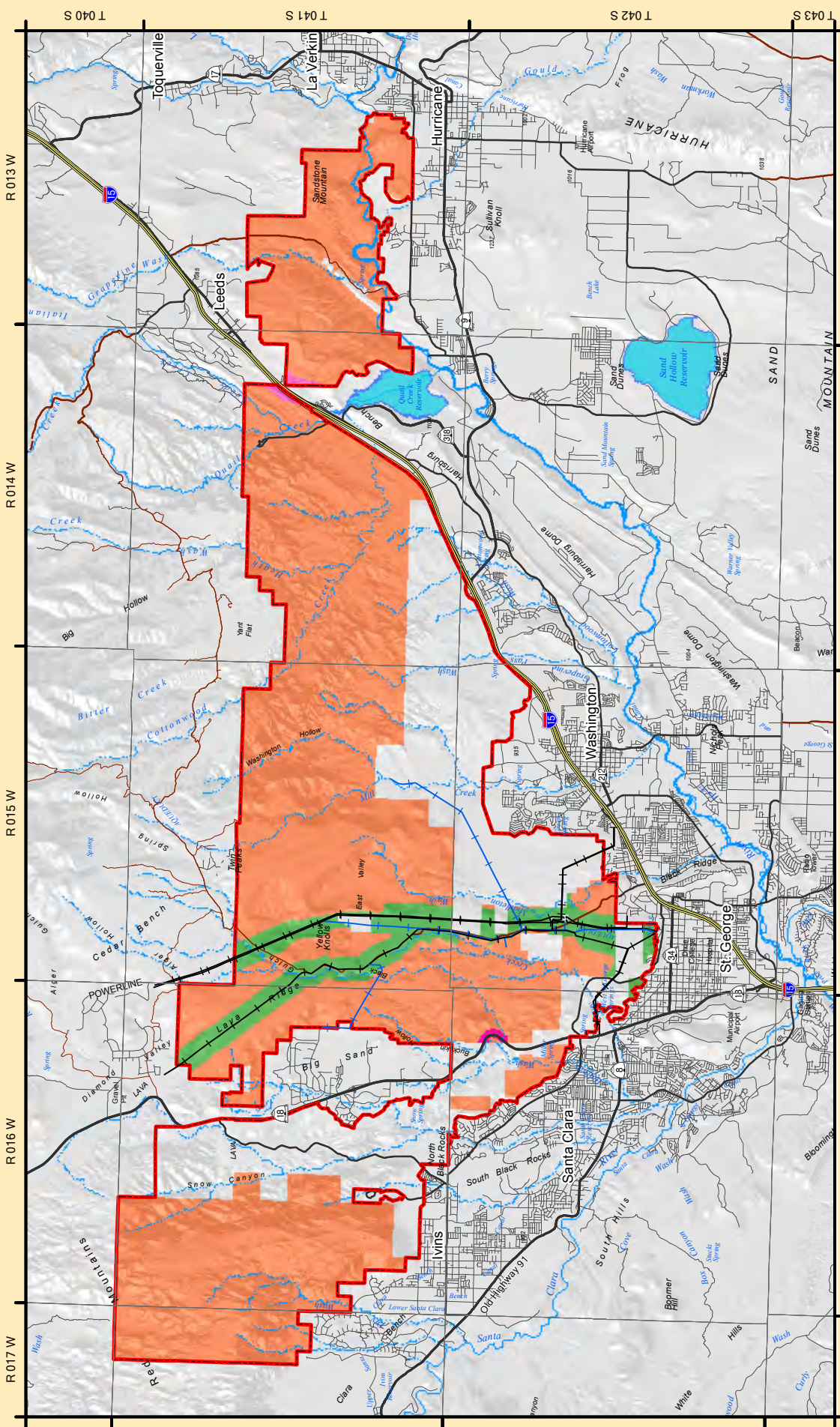
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Note: Decisions in this document only apply to BLM lands

0 0.5 1 2 Miles  
0 0.5 1 2 Kilometers

Location Map



Rights of Way Avoidance & Exclusion Areas - Red Cliffs NCA - Alternative B

- ROW Designation**
- Avoidance
  - ROW Corridor
  - Exclusion
- RCNCA Powerlines**
- Major
  - Minor
- National Conservation Area Boundary**

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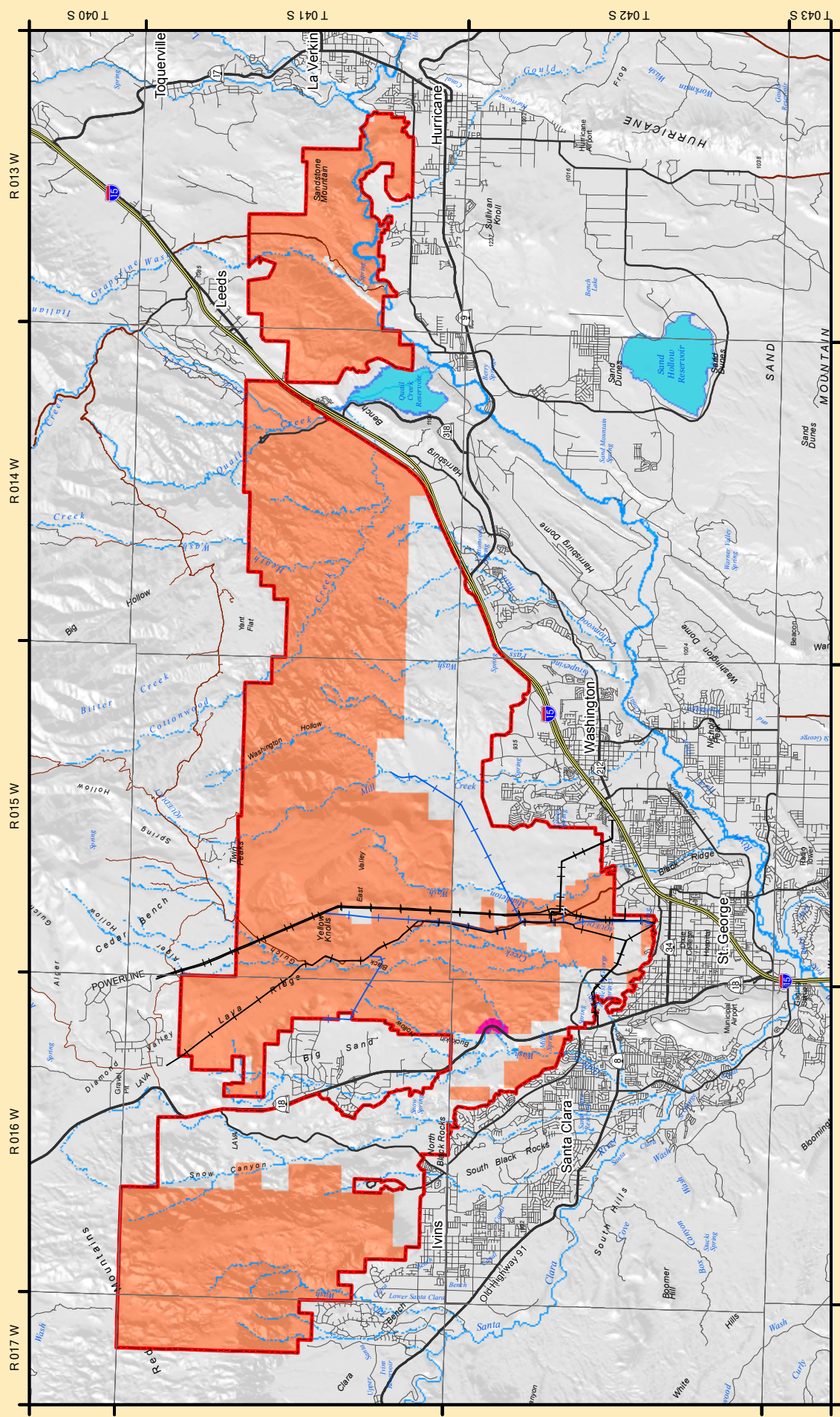
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0 0.5 1 2 Kilometers

Location Map





Rights of Way Avoidance & Exclusion Areas - Red Cliffs NCA - Alternative C

- ROW Designation**
- National Conservation Area Boundary
  - Washington County Proposed Alternative Northern Transportation Route Alignments
  - Washington County Preferred Northern Transportation Alignment Based on Title V Rights-of-Way Application

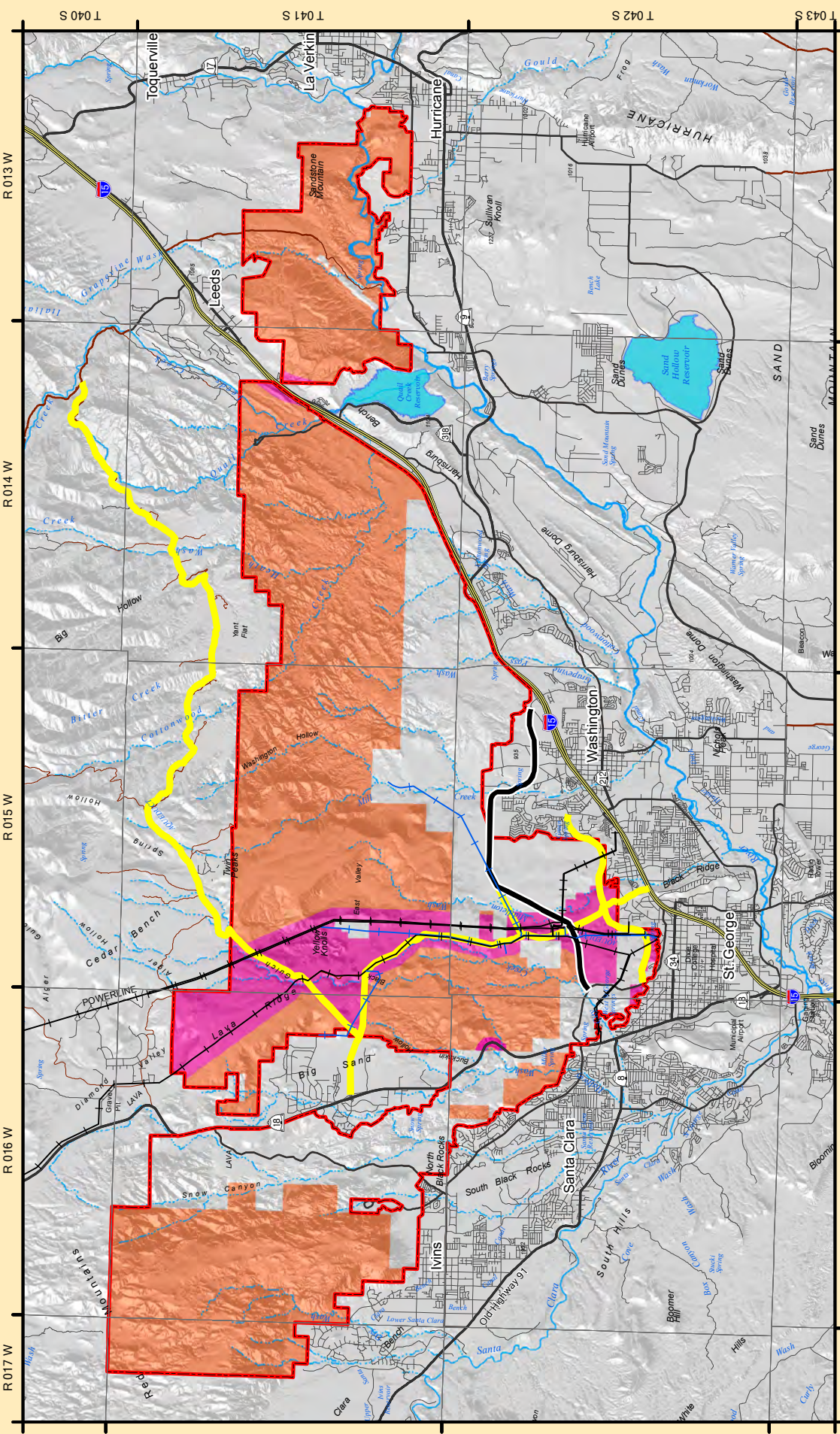
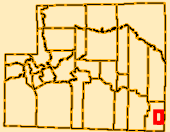
- RCNCA Powerlines**
- Major
  - Minor



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Rights of Way Exclusion Areas & Designated Utility and Transportation Corridor - Red Cliffs NCA - Alternative D

- ROW Designation**
- National Conservation Area Boundary
  - Washington County Proposed Alternative Northern Transportation Route Alignments
  - Washington County Preferred Northern Transportation Alignment Based on Title V Rights-of-Way Application

- Existing Powerlines**
- Major
  - Minor



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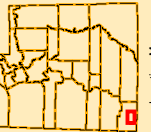




Table 2-68 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<p>New ROW may be authorized in the Reserve in accordance with protocols established in the HCP for such purposes (HCP, Appendix A, Washington County, 1995). The protocols are intended to avoid the most sensitive areas in the reserve and to limit habitat disturbance. Among other things the protocols provide for:</p> <p>a) Use of existing corridors in and outside of the HCP Reserve;</p> <p>b) Preliminary project review by HCP biologists to minimize adverse impacts;</p> <p>c) Consultation with the USFWS;</p> <p>d) Preconstruction clearance and construction oversight by qualified biologists;</p> <p>e) Avoidance of burrows;</p> <p>f) Fencing and reduction of hazards created by construction activity;</p> <p>g) Removal of tortoises at risk by qualified personnel.</p> <p>LD-14: ROW Corridor along I-15 described in SGFO RMP Table 2-2: from beginning of public lands to the north to below Harrisburg Junction.</p> <p>Following State Route 18 Highway from St. George to Veyo. This corridor would be the width of the currently fenced road ROW.</p>	<p>Retain the existing designated ROW corridors along SR 18 and I-15 (total of 183 acres) through the NCA.</p> <p>In ROW Avoidance areas, new ROWs could be authorized only if the project-specific NEPA analysis indicates that the construction and operation of the facility would not result in the incidental take of federally-listed species; the adverse modification of designated critical habitats; or adverse effects to NRHP-listed or eligible properties, and if the following criteria are met:</p> <p>a) Facility design and placement would avoid or result in minimal impacts on other NCA resources and values, including the scenic qualities of the NCA.</p> <p>b) Facility construction could be accomplished through methods that minimize new surface disturbances and resource impacts, such as helicopter placement of towers;</p> <p>c) New access roads would not be required for facility construction, operation, and maintenance;</p> <p>d) Existing access roads would not be permanently widened or upgraded for facility construction, operation, and maintenance; temporary enlargements or modifications to existing access routes needed during construction would be rehabilitated immediately after construction is completed;</p> <p>e) Facility construction, operations, and maintenance would not require off-road travel by motorized vehicles.</p> <p>ROW Corridor along I-15 would be carried forward.</p>	<p>Retain the existing designated ROW corridor along SR 18 through the NCA (50 acres).</p> <p>Revoke the existing designated ROW corridor along I-15 through the NCA (133 acres), subject to valid existing rights.</p> <p>Do not designate new corridors for linear ROWs (e.g., utility, transportation) in the NCA.</p>	<p>Retain the existing designated ROW corridors along SR 18 and I-15 (total of 183 acres) through the NCA.</p> <p>Designate a new 6,350 acre utility and transportation ROW corridor (<b>Map 2-46</b>).</p> <p>Require new power transmission lines and associated facilities within the corridor to be co-located as closely as possible to the existing lines and facilities.</p>

Table 2-68 Lands and Realty			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Site-type Leases and ROWs:			
No similar action.	Exclude new site-type ROWs (e.g., cell towers).		
Other Land Use Authorizations:			
No similar action.	Do not authorize leases under the authority of the Recreation and Public Purposes Act within the NCA.  Only authorize commercial film permits if they further public understanding and appreciation of the NCA and its purposes. Permits may be subject to surface use and seasonal restrictions and will only be granted after applicable environmental compliance legal requirements have been satisfied, including site-specific NEPA analyses.		



Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Air Quality</b>			
For all Alternative considered by this analysis, the magnitude of the changes in emissions would be insufficient to have the potential to cause significant impacts to air quality within or adjacent to the planning area.  Particulate matter (PM10, PM2.5) in the form of fugitive dust is the pollutant of most concern for the planning area, followed by precursors of ozone formation (NO2, VOC). Coarse fugitive dust (PM10), such as would be released through surface disturbances related to motorized vehicle travel on unpaved roads, is considered to be a localized pollutant, rather than a regional scale pollutant, and can create elevated short-term impacts and nuisance level conditions. Under all Alternative, BLM would implement BMPs, dust abatement measures, or other management actions to reduce particulate emissions resulting from management actions.			
<b>Water Resources</b>			
This alternative does not identify specific management actions related to water resources of the NCA.  This alternative would continue to protect water resources and ensure compliance with state and federal water laws pertaining to water quality and pollution prevention.	This alternative would have management actions that overall would provide greater protections to surface water resources than those under Alternative A, but not as many as Alternative C.	This alternative would provide the most protection for surface water resources, by having the most restrictions (in both extent and area) on authorized land uses or activities that could potentially impair surface water quality.	This alternative would have management actions that overall would provide greater protections to surface water resources than those under Alternative A, but not as many as Alternative C.
<b>Geological and Paleontological Resources</b>			
This alternative identifies no specific Use Allocations or management actions related to geological or paleontological resources in the NCA. Significant paleontological resources would continue to be managed as required by law (e.g., PARPA).	Significant paleontological resources and outstanding geological resources would be identified, evaluated, and managed under appropriate Use Allocation through management plans developed to conserve and protect these values.  Significant resources would be allocated to Conservation for Future Use, Scientific Use, and Public Use. Research could be authorized that includes specimen collection and interpretation provided on or off-site for appropriate Public Use Sites.		
No similar action.	This alternative would allow interpretation for resources that are managed for Public Use to be developed on-site.	This alternative would allow interpretation for resources that are managed for Public Use to be developed off-site.	Impacts same as Alternative B.
<b>Cave and Karst Resources</b>			
This alternative identifies no Use Allocations or specific management actions related to Cave and Karst Resources in the NCA. These resources would continue to be managed as required by law and BLM policies.	Cave and karst resources would be identified, evaluated, and managed under appropriate Use Allocation through management plans developed to conserve and protect these values.		
No similar action.	This alternative would allow interpretation for significant cave and karst resources that are managed for Public Use to be developed on-site.	This alternative would allow interpretation for significant cave and karst resources that are managed for Public Use to be developed off-site.	Impacts would be the same as Alternative B.

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Soil Resources</b>			
This alternative identifies no specific management actions relating to the location of new developments (i.e. recreation facilities), and would not protect soils to the same degree as the three action Alternative. These resources would continue to be managed as required by law and BLM policies.	This alternative would have management actions that overall would provide greater protections to soil resources greater than those under Alternative A, but not as many as Alternative C.	This alternative would provide the most protection for soil resources, by having the most restrictions (in both extent and area) to activities that could damage or destroy soil crusts and vegetation cover, and cause excess erosion and compaction.	This alternative would have management actions that overall would provide greater protections to soil resources than those under Alternative A, but not as many as Alternative C.
<b>Native Vegetation Communities</b>			
Alternative A provides for the protection and management of native vegetation communities, through fire suppression, a wide array of hazardous fuel reduction treatments, and noxious weed and invasive species management. It allows for prescriptive fire and mechanical treatments and vegetation conversions to benefit livestock and wildlife. Vegetation restoration projects could be authorized using non-native species, if certain criteria are met.	Alternative B provides for the conservation, protection, and restoration of native vegetation communities, through fire suppression, a narrower suite of hazardous fuel treatment methods and noxious weed and invasive species management options. It would not authorize vegetation conversions, would focus on substantially non-invasive methods for fuel reduction and vegetation restoration, and emphasize the use of native species, unless a higher number of specific criteria, when compared to Alternative A, can be met.	Alternative C emphasizes the least invasive methods possible to achieve the conservation, protection, and restoration of native vegetation communities. It would not authorize vegetation conversions, would require only non-invasive methods for fuel reduction and vegetation restoration and require the use of native species. Overall, Alternative C provides the greatest protection of vegetation and biophysical settings.	Alternative D provides greater flexibility than Alternative B and C, but less than Alternative A, in the methods that can be used to conserve, protect, and restore native vegetation communities. It would allow for invasive methods for fuels treatments and vegetation restoration projects and for the use of non-native species, with fewer constraints.
No similar action.	Under all Alternative, opportunities for scientific research, climate change monitoring, public education and interpretation could result in greater understanding of resources and improvements in management techniques to protect or enhance vegetation resources, biophysical settings, and the ecosystems within the NCA.		
<b>Fire and Fuels</b>			
Vegetation treatments, restoration/rehabilitation projects, and fuels management efforts would serve to enhance native vegetation communities and reduce the presence and proliferation of non-native, invasive species. This would decrease fire frequency and intensity by promoting healthy, diverse vegetation communities that fuel low-intensity fires, slow the spread of fire, and allow fires to be more easily controlled. Fire	The impacts would be similar to those identified under Alternative A, except increased vegetation treatments designed to enhance vegetation health and wildlife habitat, increased restrictions on surface disturbing activities (including ROW developments), and substantial limitations on OHV use would decrease the probability of wildland fire occurrence and the potential for high-intensity wildland fires.	The impacts would be similar to those identified under Alternative B, except the overall extent and intensity of the impacts would decrease slightly due to increased restrictions on resource uses.	The impacts would be similar to those identified under Alternative B, except the overall extent and intensity of the impacts would increase slightly due to decreased restrictions on resource uses.

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
suppression efforts would contribute to these effects by protecting unburned native vegetation communities.  Recreation activities and ROW developments could increase fire frequency by introducing additional ignition sources and increasing the probability of unintentional ignitions.			
Noxious Weeds and Invasive Species			
Specific weed treatments will be determined by plant species, site characteristics, and management objectives.  A combination of approaches may be employed to achieve the most environmentally sound results including mechanical, biological, and chemical techniques or changes in land use.	Alternative B would provide a greater range of techniques for weed control by authorizing the use of biological controls, targeted grazing, hand removal, herbicides, mechanical methods, or a combination of methods for weed treatments, depending on target species, infestation level, site characteristics, and project scale (see Table 2-8 for descriptions of each method).	Alternative C would only allow the removal of noxious weeds by hand tools, potentially limiting the effectiveness and extent of weed treatments that could be accomplished.	Alternative D would allow the widest range of techniques for weed control including the use of flaming (see Table 2-8 for descriptions of each method).
No similar action.	Emphasis would be placed on re-vegetation of disturbed and fire-damaged landscapes with healthy native vegetation communities that would not be susceptible to the establishment or spread of noxious weeds and invasive species.		
Vegetation Resource Uses: Livestock Grazing			
Management of livestock grazing under any of the Alternative would have no impacts on resource values in the NCA, as livestock do not graze within the NCA portions of the Sand Wash and Veyo allotments and no changes are proposed relating to the availability of public lands for grazing in these allotments.			
Alternative A would continue to make the 1,800 acres of public land within the Diamond Valley Allotment, including the 1,200 acres within the NCA boundary, available for grazing over the life of the RMP and subject to the terms and conditions of the federal grazing permit.	Alternative B, C, and D propose to make 1,800 acres of public lands in the Diamond Valley allotment, including the 1,200 acres that are within the NCA boundaries, unavailable for grazing over the life of the RMP. As livestock have not been grazed within this allotment for more than 25 years, there would be no impacts on current grazing operations.		
Vegetation Resource Uses: Plant Materials			
This alternative continues the prohibition on the sale of forest products and plant materials on the majority of the NCA (Beaver Dam Slope ACEC). Native Americans would be able to use these	Under all Alternative, all public lands within the NCA would be closed to commercial and non-commercial harvesting of forest products, desert plants, plant materials, and seed collection, helping to conserve and protect the viability of native vegetation communities.  The collection of plant materials, plants, seeds, cuttings, and biological soil crust communities for research, conservation, and future use, following established protocols, providing sources of locally-collected materials for restoration projects in the NCA. Native Americans would be		

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
resources for religious, ceremonial, and traditional purposes, providing a beneficial effect.	able to use these resources for religious, ceremonial, and traditional purposes, providing a beneficial effect.		
<b>Special Status Species (including BLM Sensitive)</b>			
Under all Alternative, special status species plant habitats and populations would continue to be managed in compliance with laws, regulations, and agency policies, and in furtherance of the goals of approved USFWS Recovery Plans, assisting the recovery and delisting of these species.			
Under all Alternative, public lands within the NCA that support populations of and habitats for special status species in the NCA would be retained in federal ownership.			
Under all Alternative, acquisitions of non-federal lands within the NCA would be pursued, potentially assisting the conservation, protection, and enhancement of special status species.			
<b>Plants</b>			
Under all Alternative, public lands within the NCA that support populations of and habitats for special status species plants in the NCA would be retained in federal ownership, ensuring that protections required under the ESA for listed plants on federal lands continue to be in force.			
Under Alternative A, protective fencing could be installed around small areas (10 acres or less) to protect populations and habitat for Shivwits milkvetch.	Under Alternative B, C, and D, protective measures such as natural barriers, fencing, signing, and trail designation would be used to protect populations of and habitat for Shivwits milkvetch, providing a greater range of management tools to achieve resource objectives.		
<b>Wildlife</b>			
Under Alternative A, special status species habitats and populations would continue to be managed in compliance with laws, regulations, and agency policies, and in furtherance of the goals of approved USFWS Recovery Plans. Habitat degradation and loss to wildfires and drought could continue as this alternative does not emphasize full suppression of all wildfires and the development of large scale fuel breaks. Surface disturbances, dispersed camping in the Upland Zone, and management as ROW Avoidance area, outside of designated corridors and wilderness areas, continue to degrade, fragment, or damage habitats for some species.  Management for natural resources such as soil, water and riparian habitat would	Alternative B would provide greater benefits to special status species, when compared to Alternative A, through fire suppression, the development of fuel breaks, and management of the NCA as an Exclusion area for new ROWs, outside of two designated corridors.	Alternative C provides the greatest protection of habitat for special status wildlife species, by focusing on habitat protection from wildfires, management of more acreage of the NCA as a ROW Exclusion area, and employing the least invasive tools and methods and emphasizing the use of native vegetation in the restoration of habitats.	Alternative D would provide less protection for special status species and habitats, as fire suppression and the development of fuel breaks could utilize more invasive methods and restoration projects would not emphasize the use of native species. This alternative would manage the fewest acres of the NCA as ROW Exclusion areas and designate three utility corridors, totaling 6,534 acres, where new ROWs could be developed. New developments would have the potential to adversely modify critical habitats and result in the “take” of listed species.



Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
protect habitat for special status wildlife.			
<b>Other Fish and Wildlife</b>			
Under Alternative A, native fish and wildlife populations would continue to be managed in compliance with laws, regulations, and agency policies and in furtherance of relevant UDWR management plans. Surface disturbances related to dispersed camping in the Upland Zone and the maintenance of existing utilities would degrade habitats for some species. Management of the NCA, outside of two designated wilderness areas, as a ROW Avoidance area would provide moderate protection for all fish and wildlife species.	Management of the NCA to “conserve and protect” resource values under Alternative B would benefit all fish and wildlife species. The suppression of wildfires and restoration of damaged habitats would be emphasized. The NCA, outside of two designated corridors, would be managed as ROW Exclusion area, minimizing impacts to species and habitats from new ROWs developments.	Alternative C would also strive to conserve and protect all wildlife from habitat loss to wildfires and surface disturbing activities. The NCA would be managed as a ROW Exclusion area and the designated corridor along 1-15 revoked, subject to valid existing rights, protecting aquatic and riparian habitats in Quail and Leeds Creek. Restoration of damaged lands would emphasize the least invasive methods and the use of native species.	Alternative D would emphasize the suppression and prevention of wildfires, but would manage the smallest number of acres as a ROW Exclusion area and designate three utility corridors, including a new 6,350 acre corridor. Developments within these corridors could damage, fragment, or destroy habitats, providing less protection for other wildlife than the three other Alternative.
<b>Heritage Resources</b>			
Under all Alternative, Congressional segregations, management, and uses identified in OPLMA Section 1975 provide protections for heritage resources from: entry, appropriation, and disposal under the public land laws; location, entry, and patenting under the mining laws; and operation of the mineral leasing, mineral materials, and geothermal leasing laws. All Alternative would provide a similar level of conservation and protection for heritage resources within the context of undertakings and compliance with the requirements under Section 106 of the NHPA.			
Use Allocations for heritage resources would not be made under this alternative. Management would be consistent with all legal requirements and agency policies.	Allocating and managing 100% of the National Register-eligible sites to Scientific, Conservation, Traditional, and Public Use within the NCAs would conserve, protect, and enhance heritage resources for appropriate uses.		
Alternative A would manage the two designated wilderness areas as a ROW Exclusion area and the remainder of the NCA as a ROW Avoidance area, outside of two designated corridors (along SR 18, I-15). This alternative would provide a moderate level of protection for heritage resources from new ROWs developments. Impacts could continue to occur from developments within designated corridors and from routine maintenance or potential upgrades to existing power transmission lines.	Alternative B would manage the entire NCA, outside of two designated corridors, as a ROW Exclusion area, providing a higher level of protection for heritage resources from new ROWs development than under Alternative A. Impacts could continue to occur from developments in two designated corridors (SR 18, I-15) and routine maintenance or potential upgrades to existing power transmission lines.	Alternative C would manage the entire NCA as a ROW Exclusion area, and revoke the designated corridor along I-15, subject to valid existing rights. This alternative would provide the highest level of protection for heritage resources from new ROWs development of all the Alternative. Impacts could continue to occur in one designated corridor (SR 18) and from routine maintenance or potential upgrades to existing power transmission lines.	Alternative D would manage the two designated wilderness and the remainder of the NCA, outside of designated corridors as a ROW Exclusion area. Two existing designated corridors would be retained and new corridor, totaling 6,350 acres in size designated to accommodate new utilities and the “northern transportation route” highway. New ROW developments could impact an unknown number of NRHP-eligible heritage resources with the three designated corridors.

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Wilderness</b>			
Management would be in conformance with OPLMA; the Wilderness Act of 1964, and <i>BLM Manual 6340–Management of Designated Wilderness</i> . There would be no impacts to wilderness under any alternative.			
<b>Areas of Critical Environmental Concern</b>			
The administrative designation for the Red Mountain ACEC would be carried forward.	The administrative designation for the Red Mountain ACEC, whose relevance and importance value is its scenic qualities, would be revoked. Management of the public lands in conformance with OPLMA; the Wilderness Act of 1964, <i>BLM Manual 6340–Management of Designated Wilderness</i> , the RCNCA RMP, and the Red Mountain/ Cottonwood Canyon Wilderness Management Plan would provide protections that are equal or superior to those provided by ACEC designation for the scenic qualities of the lands.		
<b>Visual Resources</b>			
Under Alternative A, the VRM Management would be as follows:  VRM Class I: 19,989 acres VRM Class II: 0  VRM Class III: 24,870 acres VRM Class IV: 0  Management under VRM Class III would provide moderate protection for visual resources in all areas of the NCA outside of designated wilderness.	Under Alternative B, the VRM Management would be as follows:  VRM Class I: 19,989 acres VRM Class II: 21,034 acres  VRM Class III: 3,652 acres VRM Class IV: 184 acres  Management under VRM Classes I and II for a majority of the NCA lands would provide a substantially higher level of protection for visual resources, when compared to Alternative A.	Under Alternative B, the VRM Management would be as follows:  VRM Class I: 21,574 acres VRM Class II: 23,285 acres  VRM Class III: 0 VRM Class IV: 0  Management of all NCA lands under either VRM Classes I or II would provide the highest level of protection for visual resources, when compared to Alternative A, B, and D.	Under Alternative D, the VRM Management would be as follows:  VRM Class I: 19,989 acres VRM Class II: 18,336 acres  VRM Class III: 0 VRM Class IV: 6,534 acres  Management of most NCA lands under either VRM Classes I or II would provide the higher level of protection for visual resources, when compared to Alternative A. Management of 6,534 acres under VRM Class IV would allow substantial changes to the landscape through utility and transportation developments, negatively impacting the scenic qualities of those acres.
<b>Natural Soundscapes</b>			
No management actions to address Natural Soundscapes.	Solitude is a consistent component of Backcountry and Primitive Recreation Management Zones and is closely correlated with natural quiet. Visitors have ample opportunity within the NCA to experience natural quiet, free of the sights and sounds of the nearby urban interface. It is not possible to adequately quantify the value of natural soundscapes to visitors until such time as acoustic data has been collected and analyzed.		
<b>Lands with Wilderness Characteristics</b>			
Lands with wilderness characteristics would be managed as a ROW Avoidance area, under Class III for VRM, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuelwood harvesting and seed and plant material	Lands with wilderness characteristics would be managed as a ROW Avoidance area, under Class III for VRM, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuelwood harvesting and seed and plant material	Lands with wilderness characteristics would be managed as ROW Exclusion area, under VRM Class I, OHV area designation is Limited to Designated Roads and Trails, and closed to commercial and non-commercial fuelwood harvesting, seed and plant collection.	Management of lands with wilderness characteristics would be the same as Alternative B, conferring the same benefit and protections for lands with wilderness characteristics.

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
collection. Management would provide a moderate level of protection for lands with wilderness characteristics.	collection. Management would provide a moderate level of protection for lands with wilderness characteristics.	Management would provide the highest level of protection, when compared to Alternative A, B, and D. Management under VRM Class I would increase the protection of opportunities for solitude and primitive recreation.	
Recreation and Visitor Services			
ERMA management would provide the minimum level of recreation management and opportunities, but in general many types of recreation would be available throughout the planning area.	Establishing SRMAs and RMZs in the NCAs and increased public education efforts would provide more focused recreation opportunities and better visitor information. Also, some commercial, competitive, large-group, and camping opportunities could be reduced or have more restrictions because of efforts to protect critical tortoise habitat. Expanding the non-motorized trail systems in the NCAs would increase opportunities for backpacking and hiking.	Impacts on recreation and visitor services would be similar to Alternative B, except increased efforts to protect critical habitat could increase some of the restrictions on recreation use.	Impacts on recreation and visitor services would be similar to Alternative B, except some restrictions on competitive events and camping would be reduced.
Travel and Transportation Management			
Under all Alternative, there would be no variation in OHV area designations. The designation of “Limited to Designated Roads and Trails” applies to the entire NCA and has been in place since 1999 to protect critical desert tortoise habitat through the Washington County HCP. No change would be made to that designation in this plan.			
Lands and Realty			
Designated wilderness areas (19,989 acres) would be managed as ROW Exclusion areas; the remainder of the NCA as a ROW Avoidance area. Two designated corridors would be retained: along SR 18 and I-15. Management could restrict the development of new ROWs in the Avoidance area, unless specific criteria are met.	Approximately 41,023 acres would be managed as a ROW Exclusion area and 3,652 acres as ROW Avoidance area. Two designated corridors would be retained: along SR 18 and I-15. Impacts on lands and realty would be higher when compared to Alternative A.	The NCA would be managed as a ROW Exclusion area. The existing designated corridor along SR 18 would be retained, but the I-15 corridor revoked, subject to valid existing ROWs. This alternative would be the most restrictive of lands and realty actions of the four Alternative.	Approximately 38, 352 acres would be managed as ROW Exclusion area; 6, 534 acres would be managed in three designated utility and transportation corridors. This alternative would create few impacts on lands and realty management, when compared to Alternative B and C, but potentially higher impacts than under Alternative A.

Table 2-69 Comparative Summary of Impacts for Red Cliffs NCA			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Socioeconomics			
Economic Impacts – Nonmarket Values			
Provides some protection of nonmarket values, but would probably result in some losses and would forego enhancement of values.	Relative to Alternative A, Alternative B provides greater protection and enhancement of most nonmarket values.	Relative to Alternative A and B, provides greater protection and enhancement of most nonmarket values.	Relative to Alternative A, provides greater protection and enhancement of some nonmarket values.  Designation of a new, 6350 acre ROW corridor could have significant negative impacts on many nonmarket values.
Social Impacts			
Motorized Recreation Stakeholders and Livestock Grazing Stakeholders would view favorably. Habitat and Resource Conservation Stakeholders and Economic Development Stakeholders would view unsatisfactory. Mixed views by Non-Motorized Recreation Stakeholders.	Relative to Alternative A, this alternative would be favored by Habitat and Resource Conservation Stakeholders. Less preferred by Livestock Grazing Stakeholders and Economic Development Stakeholders. Similar to Alternative A for Motorized Recreation Stakeholders and Non-Motorized Recreation Stakeholders.	Relative to Alternative A and B, this alternative would be favored by Habitat and Resource Conservation Stakeholders. Similar to Alternative A and B for Motorized Recreation Stakeholders and Non-Motorized Recreation Stakeholders. Similar to Alternative B for Livestock Grazing Stakeholders. Least favorable alternative for Economic Development Stakeholders.	This alternative would be less satisfactory to Habitat and Resource Conservation Stakeholders. Similar to Alternative A and B for Motorized Recreation Stakeholders and Non-Motorized Recreation Stakeholders. Same as Alternative A for Livestock Grazing Stakeholders. Most favorable alternative for Economic Development Stakeholders.

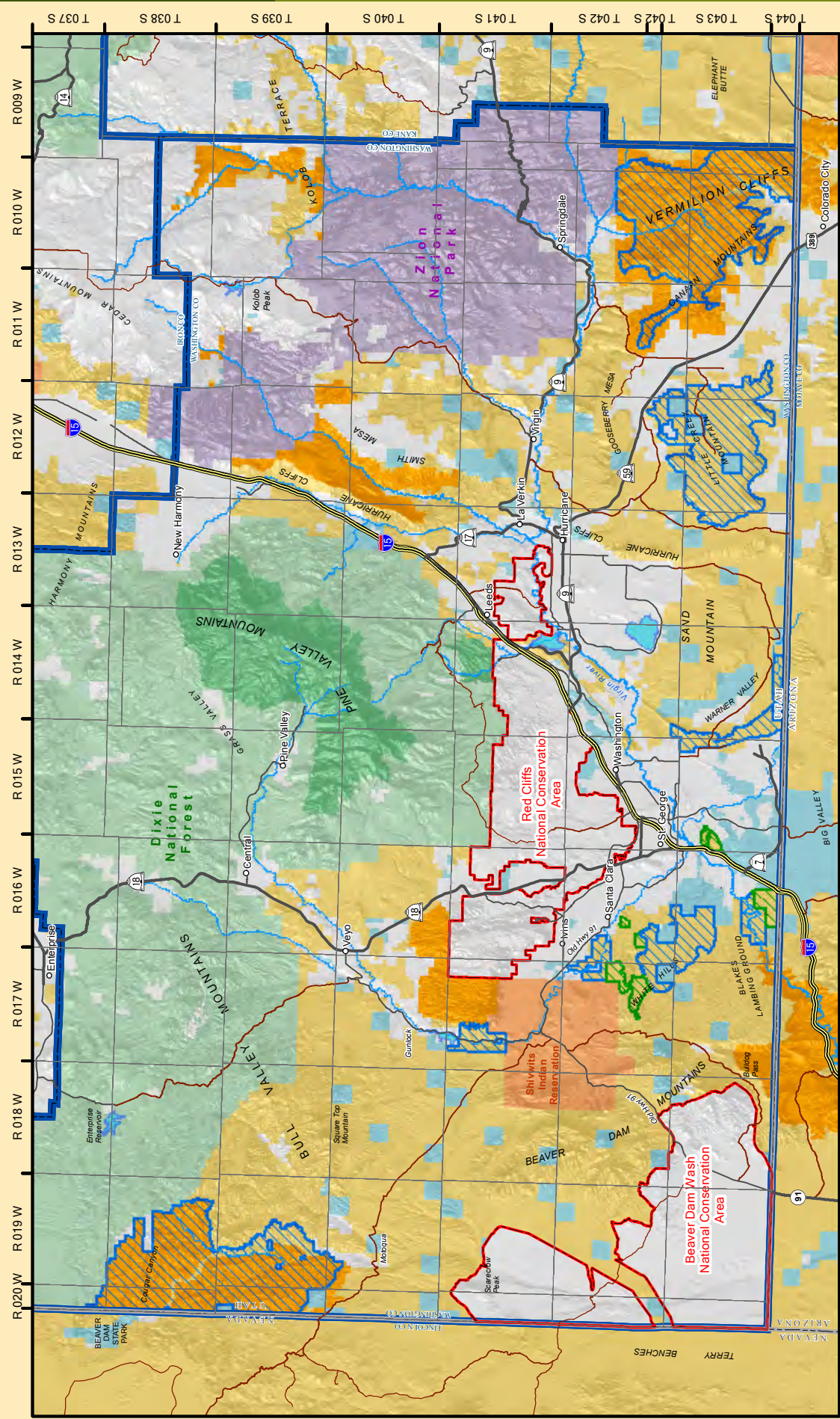


2.3.3 St. George Field Office RMP Amendment Alternative Tables

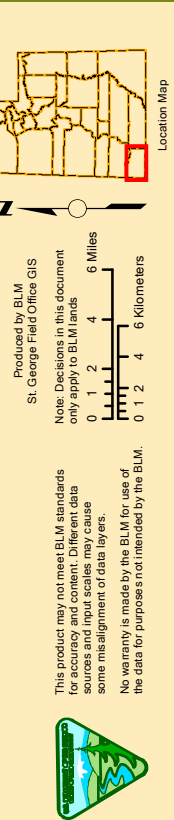
Table 2-70 Areas of Critical Environmental Concern

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Goal			
	Biological conservation and restoration mandates from OPLMA (Section 1979) for priority biological areas are satisfied through the administrative designation of new ACECs.		
Objectives			
Where BLM determines that certain public land areas require special management to prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems, it may, with appropriate public participation, designate such lands as ACECs.	Identify and evaluate areas where the relevance and importance criteria, as stated at 43 CFR 1610.7.2, are met for the administrative designation of ACECs to satisfy biological conservation and restoration mandates from OPLMA (Section 1979).  Re-evaluate existing ACECs when developing new or revised RMPs to determine if special management attention through this administrative designation continues to be required.		
New ACECs would not be designated.  Public lands would continue to be managed under decisions from the SGFO RMP.	Designate the following new ACECs:  a) South Hills ACEC (1,950 acres);  b) State Line ACEC (1,410 acres);  c) Webb Hill ACEC (520 acres).  (Map 2-47)	Designate the following new ACECs:  a) Dalton Wash ACEC (14 acres);  b) Grafton ACEC (45 acres);  c) Harrisburg Bench ACEC (111 acres);  d) Moody Wash ACEC (24 acres);  e) Mosquito Cove ACEC (88 acres);  f) North Creek ACEC (54 acres);  g) Santa Clara River Baker ACEC (32 acres);  h) Santa Clara River Veyo ACEC (16 acres);  i) Scarecrow Peak ACEC (9,664 acres);  j) Shinob Kibe ACEC (70 acres);  k) South Hills ACEC (1,950 acres);  l) State Line ACEC (1,410 acres);  m) Virgin River ACEC (245 acres);  n) Webb Hill ACEC (520 acres). (Map 2-48)	Do not designate new ACECs. Public lands would continue to be managed under decisions from the SGFO RMP, as shown under Alternative A.





Area of Critical Environmental Concern (ACEC) - St. George Field Office - Alternative B



Area of Critical Environmental Concern (ACEC) - St. George Field Office - Alternative C

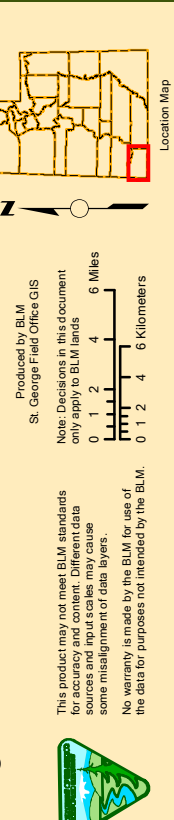




Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
ACECs established by approval of this Plan are shown on SGFO RMP Map 2.17. a) Red Bluff ACEC (6,166 acres); b) Warner Ridge/Fort Pearce ACEC (4,286 acres); c) Santa Clara/Gunlock ACEC (2,002 acres); d) Santa Clara River/Land Hill ACEC (1,664 acres); e) Lower Virgin River ACEC (1,806 acres); f) Little Creek Mountain ACEC (19,331 acres); g) Canaan Mountain ACEC (33,955 acres); h) Upper Beaver Dam Wash ACEC (33,108 acres); (Map 2-49)	Continue to manage the following as ACECs: a) Red Bluff ACEC (6,166 acres); b) Warner Ridge/Fort Pearce ACEC (4,286 acres); c) Santa Clara/Gunlock ACEC (2,002 acres); d) Santa Clara River/Land Hill ACEC (1,664 acres); e) Lower Virgin River ACEC (1,806 acres); f) Little Creek Mountain ACEC (19,331 acres); g) Canaan Mountain ACEC (33,955 acres); h) Upper Beaver Dam Wash ACEC (33,108 acres). (Map 2-49)		
Management Prescriptions Applicable to All New Proposed ACECs (Alternative B and C)			
Lands and Realty:			
New ACECs would not be designated.	Public lands in ACECs will be retained in federal ownership.	Same as Alternative A.	
New ACECs would not be designated.	Non-federal lands within or adjacent to an ACEC may be acquired for the purposes of conservation of relevance and importance values, through purchase, exchange, or donation. Acquired lands will be incorporated into the ACEC and managed in accordance with the prescriptions applied to the remainder of the ACEC.	Same as Alternative A.	
New ACECs would not be designated.	All ACECs are subject to valid and existing rights. Unless otherwise restricted by law, allow renewal and transfer of existing land use authorizations within ACECs, if otherwise designated as Avoidance or Exclusion areas.	Same as Alternative A.	
New ACECs would not be designated.	Land use authorizations that could result in the irreparable damage of relevant and important values within ACECs will not be authorized. Ground-disturbing military maneuvers and landfills will not be authorized in ACECs.	Same as Alternative A.	
Woodland Products Harvesting and Collection:			
New ACECs would not be designated.	Commercial and personal use woodland products harvesting (green wood, dead and down, poles, and Christmas trees) and firewood gathering is prohibited.	Same as Alternative A.	

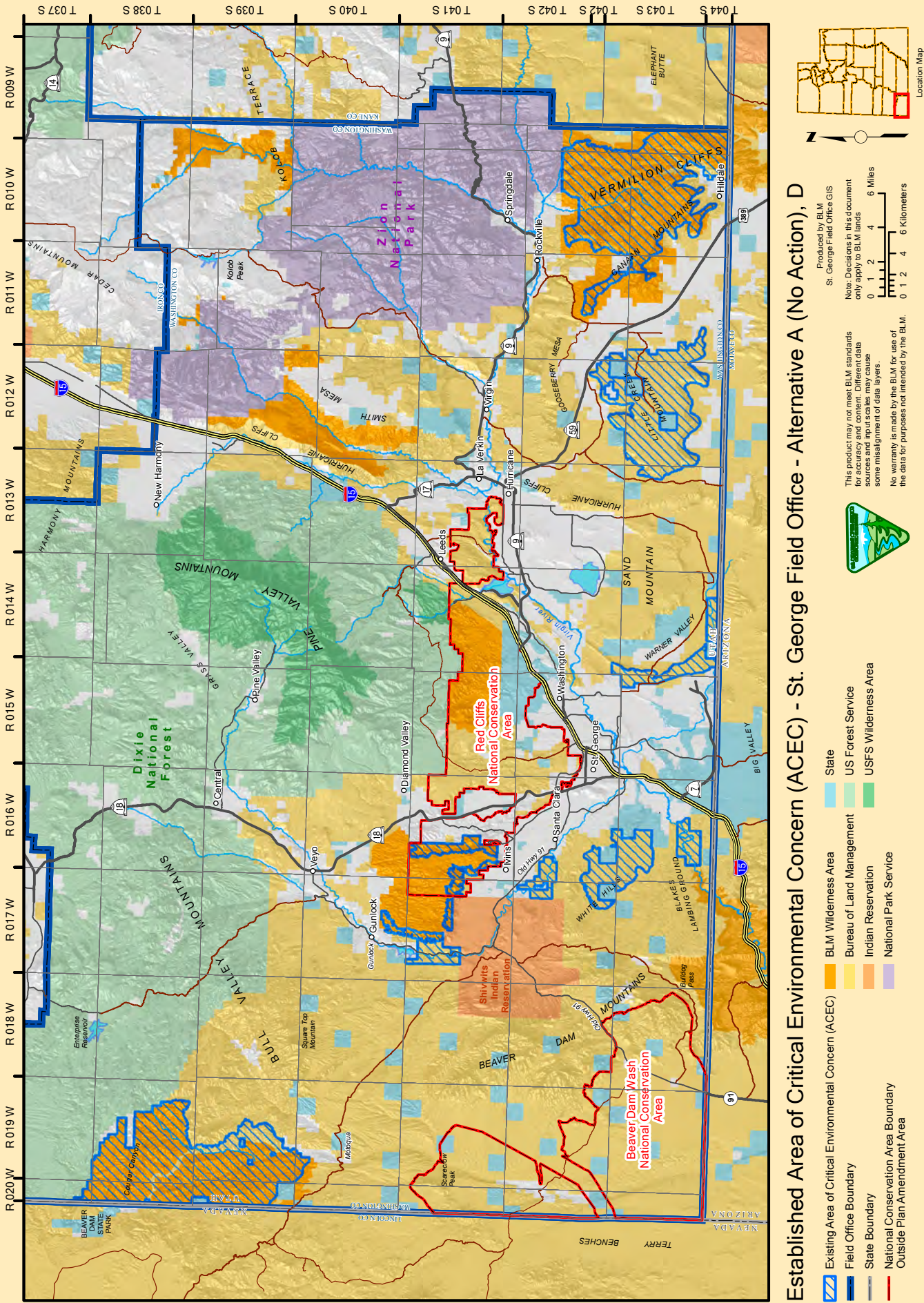




Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Livestock Grazing:</i>			
New ACECs would not be designated.	Unless previously made unavailable for livestock grazing in the SGFO RMP, public lands are available for livestock grazing in ACECs, subject to the Terms and Conditions of federal grazing permits and the Terms and Conditions of Biological Opinions issued by USFWS, pursuant to Section 7 consultations under the ESA for federally-listed species.	Same as Alternative A.	
<i>Minerals Management:</i>			
Locatable Minerals:			
New ACECs would not be designated.	Locatable: Public lands in Washington County will remain available to mining location under the General Mining Law of 1872 and applicable regulations, except where segregated from mineral entry by law or withdrawn in accordance with applicable law. Plans of Operation required for development in ACECs.	Same as Alternative A.	
Saleable:			
New ACECs would not be designated.	Saleable: ACECs are closed to mineral materials disposal.	Same as Alternative A.	
<b>South Hills Potential ACEC: Endangered Species: Dwarf Bearclaw Poppy (<i>Arctomecon humilis</i>) and Holmgren Milkvetch (<i>Astragalus holmgreniorum</i>)</b>			
New ACEC would not be designated.	Designate and manage as a 1,950-acre ACEC to protect populations and habitat for dwarf bearclaw poppy and Holmgren milkvetch.	Same as Alternative A.	
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
Retain 80% of public lands in federal ownership; 20% identified for disposal in the 1999 SGFO RMP.	Retain 100% of public lands in federal ownership.	Same as Alternative A.	
SGFO RMP VG-09, LD-19: Manage as ROW Avoidance area for linear, site-type, and material site ROWs.	Manage as Exclusion area for linear, site-type, and material site ROWs.	Same as Alternative A.	
<i>Native Vegetation Management:</i>			
SGFO RMP FR-01, FR-08: T&E plant habitats are closed to seed harvesting.	Manage as closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.	Same as Alternative A.	
No similar action.	Collection of native seeds, cuttings, biological soil crust communities and species for scientific research, conservation, and for use in future restoration projects would be authorized, as long as this activity is compatible with resource management objectives. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.	Same as Alternative A.	

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Noxious Weeds and Invasive Species Management:</i>			
Habitat areas for Holmgren's Milkvetch and Hermit's Milkvetch will be kept free from use of chemical pesticides and herbicides.	Approved herbicides to control exotic invasive annuals or noxious weeds could be authorized for use, on a case-by-case basis, within the ACEC. Consultations would be conducted with USFWS to identify appropriate herbicide, application methods, as well as other project protocols, to ensure that special status plants are not impacted. Restore and re-vegetate treatment areas to reduce the potential for re-infestations.		Same as Alternative A.
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
Open to fluid mineral leasing, with Special Stipulations (Category 2): 1,950 acres (SGFO RMP RP-11 Table 2-5). Appendices 1 and 2 apply to fluid mineral leasing and development.	Open to fluid mineral leasing with No Surface Occupancy Stipulation.	Closed to fluid mineral leasing.	Same as Alternative A.
<i>Recreation Management:</i>			
Public lands will generally remain open to most forms of outdoor recreation, including... camping. Dispersed camping allowed on public lands; subject to 14 day limit. Groups of more than 75 require letter of authorization prior to camping on undeveloped lands, except where more restrictive rules apply.	Closed to dispersed camping.		Same as Alternative A.
Public lands will generally remain open to most forms of outdoor recreation, including... target shooting.	Authorize the discharge of firearms. Except in the act of licensed hunting, all firearms must be discharged toward a proper backstop sufficient to stop the projectile's forward progress.  Targets must be constructed of wood, cardboard, paper or similar unbreakable materials. All targets, clays, and shells are considered litter after use and must be removed and disposed of properly.	Prohibit the discharge of firearms, except in the act of licensed hunting according to state laws during prescribed seasons.	Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.		Same as Alternative B.



Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Travel Management:</i>			
SGFO RMP VG-09, OV-01: OHV area designation limited to designated routes, OV-04: Ability to close routes in sensitive species habitat.	OHV area designation is Limited to Designated Roads and Trails.	OHV area designation is Closed to OHV use.  Access to valid existing rights that requires motorized vehicles would be authorized but would require prior approval from BLM.	Same as Alternative B.
<i>Visual Resource Management:</i>			
SGFO RMP VR-01: Manage as VRM III.	Manage as VRM Class II.		Same as Alternative A.
<b>State Line Potential ACEC: Endangered Species: Holmgren’s Milkvetch and Gierisch Globemallow (<i>Sphaeralcea gierischii</i>)</b>			
New ACEC would not be designated.	Designate and manage a 1,410-acre ACEC to protect populations and habitat for Holmgren milkvetch and Gierisch globemallow.		Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP VG-09, LD-19: Manage as ROW Avoidance area for linear, site-type, and material site ROWs.	Manage as an Exclusion area for linear, site-type, and material site ROWs.		Same as Alternative A.
<i>Native Vegetation Management:</i>			
SGFO RMP FR-01, FR-08: T&E Plant Habitats are closed to seed harvesting.	Closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.		Same as Alternative A.
No similar action.	Collection of native seeds, cuttings, biological soil crust communities and species for scientific research, conservation, and for use in future restoration projects would be authorized, as long as this activity is compatible with resource management objectives. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.		Same as Alternative A.
<i>Noxious Weeds and Invasive Species Management:</i>			
Habitats for Holmgren’s Milkvetch and Hermit’s Milkvetch will be kept free from use of chemical pesticides and herbicides.	Herbicides to control exotic invasive annuals or noxious weeds could be approved for use on a case-by-case basis in the ACEC. Consultations would be conducted with USFWS to identify appropriate herbicide, application methods, as well as other project protocols and monitoring requirements.		Same as Alternative A.
<i>Minerals Management:</i>			

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Fluid Mineral Leasing:			
Open to fluid mineral leasing, with Special Stipulations (Category 2): 1,410 acres (SGFO RMP RP-11 Table 2-5). RMP Appendices 1 and 2 apply to fluid mineral leasing and development.	Open to fluid mineral leasing with No Surface Occupancy Stipulation.	Closed to fluid mineral leasing.	Same as Alternative B.
<i>Recreation Management:</i>			
Public lands will generally remain open to most forms of outdoor recreation, including... camping. Dispersed camping allowed on public lands; subject to 14 day limit. Groups of more than 75 require letter of authorization prior to camping on undeveloped lands, except where more restrictive rules apply.	Closed to dispersed camping.		Same as Alternative A.
Special Recreation Permits (SRPs) may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.		Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP VG-09, OV-01: Limited to designated routes, OV-04: Ability to close routes in sensitive species habitat.	OHV area designation is Limited to Designated Roads and Trails.	OHV area designation is Closed to OHV use.  OHV use would be limited to administrative uses and require prior approval from BLM.	Same as Alternative B.
<i>Visual Resource Management:</i>			
SGFO RMP VR-01: Manage as VRM III.	Manage as VRM II		Same as Alternative A.
<b>Webb Hill Potential ACEC: Endangered Species: Dwarf Bearclaw Poppy</b>			
New ACEC would not be designated.	Designate and manage a 520-acre ACEC to protect dwarf bearclaw poppy populations and habitat.		Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP VG-08, LD-06, LD-07, Map 2.1: 20% of the potential ACEC identified for disposal in the SGFO RMP.	Retain 100% of public lands in federal ownership.		Same as Alternative A.
SGFO RMP VG-09, LD-19: Manage as ROW Avoidance area for linear, site-type, and material site ROWs.	Manage as Exclusion area for linear, site-type, and material site ROWs.		Same as Alternative A.

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Native Vegetation Management:			
SGFO RMP FR-01, FR-08: T&E Plant Habitats are closed to seed harvesting.	Closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.	Same as Alternative A.	
No similar action.	Collection of native seeds, cuttings, biological soil crust communities and species for scientific research, conservation, and for use in future restoration projects would be authorized, as long as this activity is compatible with resource management objectives. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.	Same as Alternative A.	
Noxious Weed and Invasive Species Management:			
No similar action.	Approved herbicides to control exotic invasive annuals or noxious weeds could be authorized for use on a case-by-case basis in the ACEC. Consultations would be conducted with the USFWS to identify appropriate herbicide, application methods, as well as other project protocols and monitoring requirements.	Same as Alternative A.	
Minerals Management:			
Fluid Mineral Leasing:			
Closed to fluid mineral leasing. SGFO RMP RP-11 Table 2-5: Fluid Mineral Leasing Categories			
Saleable Minerals:			
SGFO RMP VG-09, Table 2-6: Mineral Materials Sales Designations: Mineral material disposal could be authorized in a portion of the potential ACEC, subject to Section 7 consultation.	Closed to mineral materials disposal.	Same as Alternative A.	
Recreation Management:			
Public lands will generally remain open to most forms of outdoor recreation, including... camping. Dispersed camping allowed on public lands; subject to 14 day limit. Groups of more than 75 require letter of authorization prior to camping on undeveloped lands, except where more restrictive rules apply.	Closed to dispersed camping.	Same as Alternative A.	
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.	

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Non-motorized recreation use will continue to be limited to designated trails.			
Travel Management:			
SGFO RMP VG-09, OV-01: OHV area designation limited to designated routes, OV-04: Ability to close routes in sensitive species habitat.	Same as Alternative A.	OHV area designation is Closed to OHV use. OHV use would be limited to administrative uses and require prior approval from BLM.	Same as Alternative A.
Visual Resource Management:			
SGFO RMP VR-01: Manage as VRM Class III.	Manage as VRM Class II		Same as Alternative A.
Dalton Wash Potential ACEC: Endangered Species: Holmgren Milkvetch			
New ACEC would not be designated.	Same as Alternative A.	Designate and manage a 14-acre ACEC to protect Holmgren milkvetch populations and habitat.	Same as Alternative A.
Management Prescriptions: In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
Lands and Realty Management:			
SGFO RMP FW-26, RP-11, LD-19: ROW Avoidance.	Same as Alternative A.	Manage as Exclusion area for linear, site-type, and material site ROWs.	Same as Alternative A.
Native Vegetation Management:			
SGFO RMP FR-01, FR-08: T&E Plant Habitats are closed to seed harvesting.	Same as Alternative A.	Closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.	Same as Alternative A.
No similar action.	Same as Alternative A.	Collection of native seeds, cuttings, biological soil crust communities and species for scientific research, conservation, and for use in future restoration projects would be authorized, as long as this activity is compatible with resource management objectives. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.	Same as Alternative A.



Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Noxious Weeds and Invasive Species Management:</i>			
Habitats for Holmgren Milkvetch and Shivwits Milkvetch will be kept free from use of chemical pesticides and herbicides.	Same as Alternative A.	Approved herbicides to control exotic invasive annuals or noxious weeds could be authorized for use on a case-by-case basis in the ACEC. Consultations would be conducted with the USFWS to identify appropriate herbicide, application methods, as well as other project protocols and monitoring requirements.	Same as Alternative A.
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: NSO Stipulations for Oil and Gas leasing	Same as Alternative A.	Closed to fluid mineral leasing.	Same as Alternative A.
<i>Recreation Management:</i>			
Public lands will generally remain open to most forms of outdoor recreation, including... camping. Dispersed camping allowed on public lands; subject to 14 day limit. Groups of more than 75 require letter of authorization prior to camping on undeveloped lands, except where more restrictive rules apply.	Same as Alternative A.	Closed to dispersed camping.	Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Same as Alternative A.	Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to Designated Roads and Trails			
<b>Grafton Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace</b>			
New ACEC would not be designated.		Designate and manage a 47 acre ACEC to protect BLM sensitive fish and riparian values.	Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Lands and Realty Management</i>			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance.			
<i>Minerals Management</i>			
Fluid Mineral Leasing			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			
<i>Recreation Management</i>			
SFGO RMP RC-14: Restrictions and Closures can be implemented in riparian areas being impacted by camping and recreational uses.	Closed to dispersed camping.	Same as Alternative A.	
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.	
<i>Travel Management</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to designated routes.			
<b>Harrisburg Bench Potential ACEC: Endangered Species: Shivwits Milkvetch</b>			
New ACEC would not be designated.	Designate and manage a 111-acre ACEC to protect Shivwits milkvetch populations and habitat.	Same as Alternative A.	
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP VG-09, LD-19: Manage as ROW Avoidance area for linear, site-type, and material site ROWs.	Same as Alternative A.	Manage as an Exclusion area for linear, site-type, and material site ROWs.	Same as Alternative A.
<i>Native Vegetation Management:</i>			
SGFO RMP FR-01, FR-08: T&E Plant Habitats are closed to seed harvesting.	Same as Alternative A.	Closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.	Same as Alternative A.
No similar action.		Collection of native seeds, cuttings, biological soil crust communities and species for scientific research, conservation, and for use in future restoration projects would be authorized, as long as this activity is compatible with resource management objectives. Seed collection will follow the Seeds of Success Protocol, in partnership with the Great Basin and Mojave Desert Native Plant Programs. Collection of cuttings and biological soil crust communities will follow the best available protocols.	Same as Alternative A.

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5, Appendix 2: Closed to Oil and Gas leasing			
<i>Recreation Management:</i>			
SGFO RMP RC-11: Dispersed camping prohibited up to 1 mile from the Red Cliffs Recreation Area.			
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Same as Alternative A.	Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP VG-09, OV-01: OHV area designation Limited to Designated Roads and Trails.			
<b>Moody Wash Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace</b>			
New ACEC would not be designated.		Designate and manage a 24-acre ACEC to protect BLM sensitive fish and riparian values.	Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance area.			
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			
<i>Recreation Management:</i>			
SGFO RMP RC-14: Restrictions and Closures can be implemented in riparian areas being impacted by camping and recreational uses.	Closed to dispersed camping.		Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.		Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to Designated Roads and Trails			
<b>Mosquito Cove Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace</b>			
New ACEC would not be designated.		Designate and manage an 88-acre ACEC to protect BLM sensitive fish and riparian values.	Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance.			

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			
<i>Recreation Management:</i>			
SFGO RMP RC-14: Restrictions and Closures can be implemented in riparian areas being impacted by camping and recreational uses.	Closed to dispersed camping.		Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.		Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to designated routes.			
<b>North Creek Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace</b>			
New ACEC would not be designated.	Designate and manage a 54 acre ACEC to protect BLM sensitive fish and riparian values.		Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance.			
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			
<i>Recreation Management:</i>			
SGFO RMP RC-14: Restrictions and Closures can be implemented in riparian areas being impacted by camping and recreational uses.	Closed to dispersed camping.		Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.		Same as Alternative A.
<i>Travel Management:</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to designated routes.			
<b>Santa Clara River Baker Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace</b>			
New ACEC would not be designated.	Designate and manage a 32 acre ACEC to protect BLM sensitive fish and riparian values.		Same as Alternative A.
<b>Management Prescriptions:</b> In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
<i>Lands and Realty Management:</i>			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance area.			
<i>Minerals Management:</i>			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			



Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Recreation Management:			
SGFO RMP RC-14: Restrictions and closures can be implemented in riparian areas being impacted by camping and recreational uses.		Closed to dispersed camping.	Same as Alternative A.
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.		Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
Travel Management:			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation limited to designated routes.			
Santa Clara River Veyo Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace			
New ACEC would not be designated.		Designate and manage a 16-acre ACEC to protect BLM sensitive fish and riparian values.	Same as Alternative A.
Management Prescriptions: In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
Lands and Realty Management:			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance area.			
Minerals Management:			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			
Recreation Management:			
SGFO RMP RC-11, Dispersed camping prohibited within one mile of a developed campground (Baker Dam Recreation Area).			
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.		Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
Travel Management:			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to Designated Roads and Trails.			
Scarecrow Peak Potential ACEC: Threatened Species: Desert Tortoise			
New ACEC would not be designated.		Designate and manage a 9,664-acre ACEC to protect the threatened species desert tortoise.	Same as Alternative A.
Management Prescriptions: In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
Lands and Realty Management:			
SGFO RMP FW-26, LD-19: Manage as ROW Avoidance area.			
Minerals Management:			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with Special Stipulations (Category 2)		Open with NSO Stipulations to Oil and Gas leasing	Same as Alternative A.

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Recreation Management:			
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.		Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
Travel Management:			
SGFO RMP OV-01: OHV area designation Limited to existing routes.	OHV area designation is Limited to Designated Roads and Trails.		
Shinob Kibe Potential ACEC: Endangered Species: Dwarf Bearclaw Poppy			
New ACEC would not be designated.		Designate and manage a 70-acre ACEC to protect dwarf bearclaw poppy populations and habitat.	Same as Alternative A.
Management Prescriptions: In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
Lands and Realty Management:			
SGFO RMP VG-09, LD-19: Manage as ROW Avoidance area.			
Native Vegetation Management:			
SGFO RMP FR-01, FR-08: T&E Plant Habitats are closed to seed harvesting.	Same as Alternative A.	Closed to native seed, plants, and plant materials harvesting for commercial purposes and personal use.	Same as Alternative A.
Minerals Management:			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5, Appendix 2: Closed to Oil and Gas leasing			
Recreation Management:			
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.		Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.
Travel Management:			
SGFO RMP VG-09, OV-01: OHV area designation Limited to Designated Roads and Trails.			
Virgin River Potential ACEC: BLM Sensitive Species: Desert Sucker, Flannelmouth Sucker, Virgin Spinedace			
New ACEC would not be designated.		Designate and manage a 245-acre ACEC to protect BLM sensitive fish and riparian values.	Same as Alternative A.
Management Prescriptions: In addition to the management prescriptions listed above for all proposed ACECs, the following prescriptions would apply:			
Lands and Realty Management:			
SGFO RMP FW-26, RP-11, LD-19: Manage as ROW Avoidance area.			
Minerals Management:			
Fluid Mineral Leasing:			
SGFO RMP RP-11, Table 2-5: Open with NSO Stipulations for Oil and Gas leasing			

Table 2-70 Areas of Critical Environmental Concern			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Recreation Management:</i>			
Special Recreation Permits may be issued for commercial, organized group, and competitive events, subject to site-specific analysis under NEPA and Section 7 consultations.	Do not grant SRPs for commercial, organized group, and competitive events.	Same as Alternative A.	
<i>Travel Management:</i>			
SGFO RMP FW-26, RP-10, OV-05: OHV area designation Limited to Designated Roads and Trails.			

Table 2-71 Bull Valley Mountains Multi-Species Management Area

Table 2-71 Bull Valley Mountains Multi-Species Management Area			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Fulfill the mandate from OPLMA at Section 1979 to identify and manage areas where biological conservation is a priority.		
<b>Objectives</b>			
No similar action.	Manage public lands to conserve and restore plant and animal species and natural communities.		
<b>Management Actions</b>			
No similar action.	As directed by OPLMA Section 1979 and supported by Secretarial Order 3289 and Executive Order 13443, identify and manage the approximately 87,031 acre Bull Valley Mountains Multi-Species Management Area (Management Area) as a priority biological conservation area. (Map 2-50).		
<i>Land Tenure Adjustments:</i>			
Public lands... may be transferred (other than under land sale authority) if subsequent analysis determines that such transfer will meet the land transfer criteria. (SGFO RMP LD-06)	Retain approximately 87,031 acres of public land in the Management Area in federal ownership.		
	Acquire non-federal lands within the Management Area through purchase, exchange, transfer, or donation. Manage acquired lands consistent with the management prescriptions of the adjacent public lands.		
<i>Linear and Site-type ROWs:</i>			
Valid and existing rights will be recognized in the Management Area. Unless otherwise restricted by law, allow renewal and transfer of existing land use authorizations, if otherwise designated as Avoidance or Exclusion areas.			
Manage 955 acres of this area as an Avoidance area for new linear and site-type ROWs. Manage 71,468 acres as available for new ROWs.	Manage 72,423 acres of this area as an Avoidance area for new linear and site-type ROWs.	Manage 72,423 acres of this area as an Exclusion area for new linear and site-type ROWs.  Do not authorize renewable energy (e.g., wind, solar) leases or ROWs.	Same as Alternative A.
Continue to manage 14,608 acres of the Management Area within two designated utility corridors: the Intermountain Power Project Corridor and Motoqua to Shivwits Indian Reservation Corridor (refer to SGFO RMP Table 2-2 and Map 2.3 for corridor locations). These corridors will be the preferred location for new utility transmission and distribution ROWs. Where possible, BLM will encourage project sponsors to locate new ROWs in existing or designated utility and transportation corridors.			
New ROWs constructed in designated utility corridors will be subject to applicable standards listed in Appendix 1 of the SGFO RMP for surface disturbing activities and, where needed, to wildlife seasonal use restrictions.			
<i>Land Use Authorizations:</i>			
No similar action.	Do not authorize ground-disturbing military maneuvers or landfills in the Management Area.		
<i>Minerals Management:</i>			
Locatable Minerals:			
Public lands in Washington County will remain available to mining location under the General Mining Law of 1872 and applicable regulations, except where segregated from mineral entry by law or withdrawn in accordance with applicable law.			



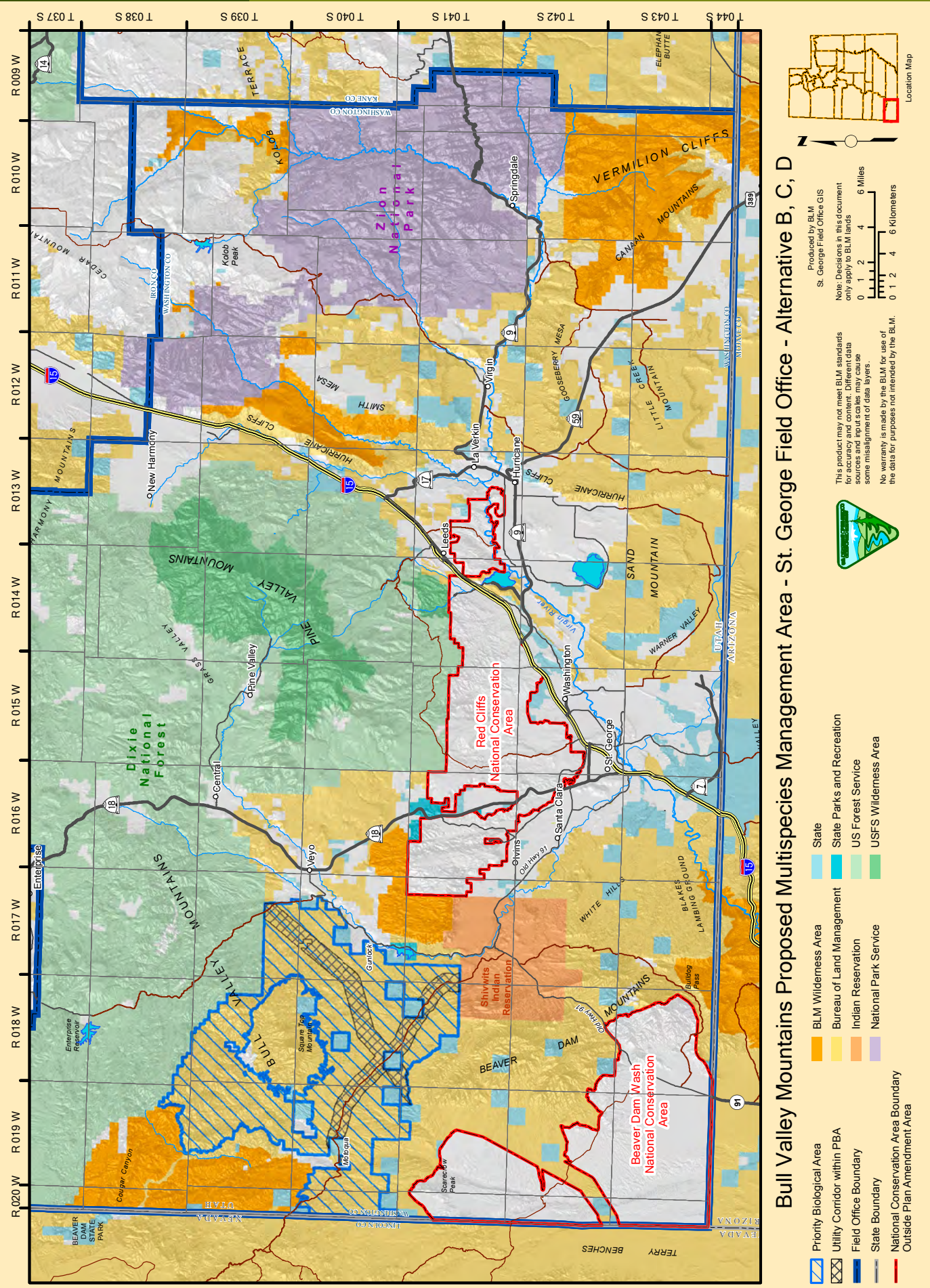


Table 2-71 Bull Valley Mountains Multi-Species Management Area			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Fluid Mineral Leasing:			
Manage public lands in the Management Area as:  Open to fluid mineral leasing, with Standard Stipulations: 58,935 acres  Open to fluid mineral leasing with Special Stipulations: 24,375 acres  Open to fluid mineral leasing with No Surface Occupancy (NSO): 1,695 acres  Closed to fluid mineral leasing: 2,026 acres	Manage public lands in the Management Area as:  Open to fluid mineral leasing with Standard Stipulations: 0 acres  Open to fluid mineral leasing with Special Stipulations: 83,310 acres:  Open to fluid mineral leasing with NSO: 1,695  Closed to fluid mineral leasing: 2,026 acres  Stipulations are identified in Appendix 2 of the SGFO RMP.	Manage 87,031 acres of public lands in the Management Area as Closed to fluid mineral leasing.	Same as Alternative A.
Mineral Material Sales:			
Manage public lands in the Management Area as:  Open for mineral material sales: 58,647 acres  Open for mineral material sales, with site-specific restrictions: 19,457 acres of crucial mule deer winter habitat.  Closed to mineral material sales: 8,981 acres  (SGFO RMP Table 2-6 and Map 2.7)	Manage public lands in the Management Area as:  Open for mineral material sales with site-specific restrictions: 78,104 acres  Closed to mineral material sales: 8,981	Manage public lands in the Management Area (87,031 acres) as Closed to mineral material sales.	Same as Alternative A.
Free use of materials will be authorized from selected areas for municipal and non-commercial purposes.	Free-use material permits that are requested to address human health and safety issues could be authorized on a case-by-case basis in the Management Area, with appropriate mitigation.		
Recreation Management:			
Restrict camping in the Management Area from October 15 to November 15 within 0.25 mile of water sources, water catchments, and UDWR guzzlers, to protect wildlife access to critical water sources during fall big game hunting season.			

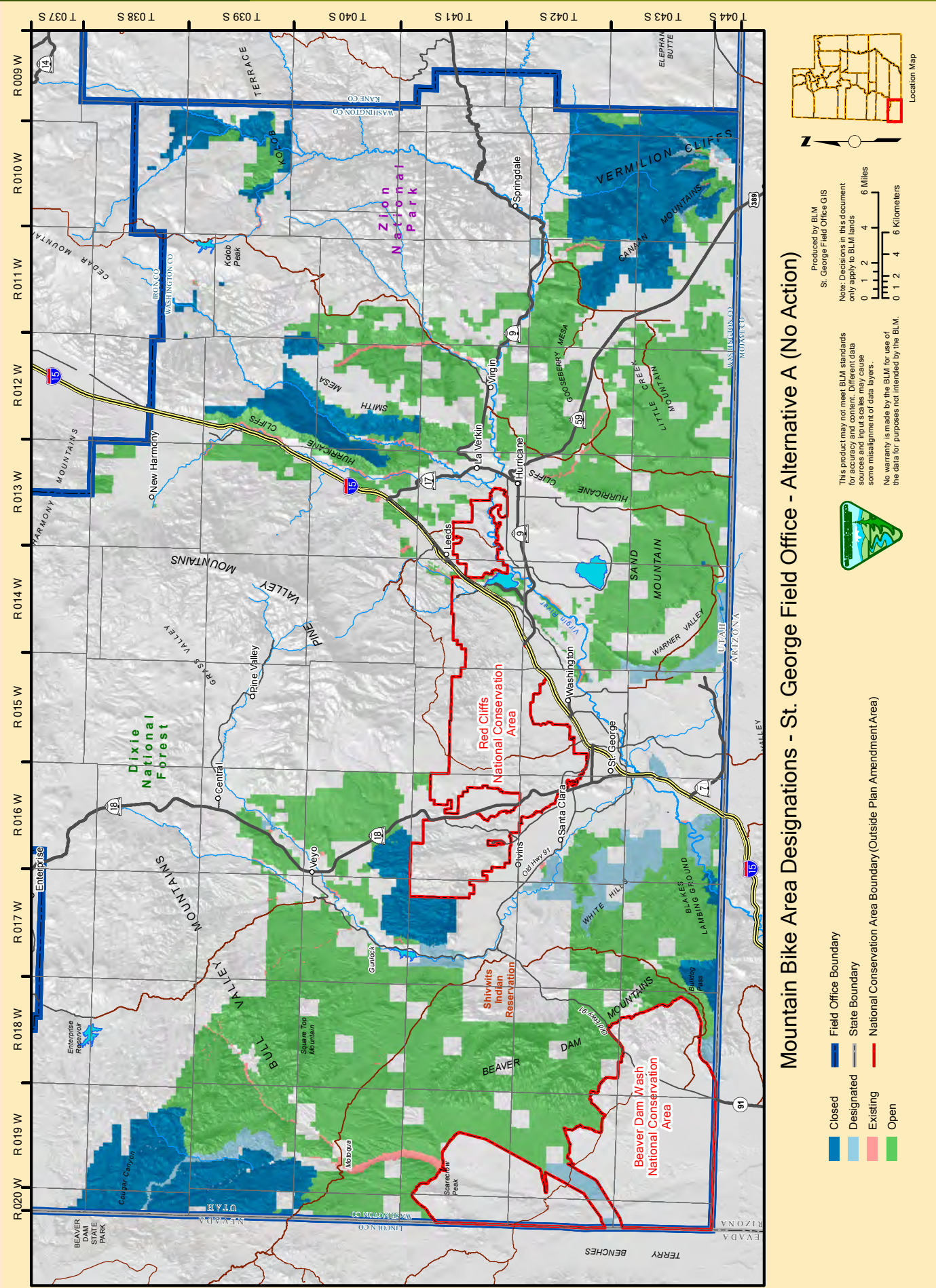


Table 2-71 Bull Valley Mountains Multi-Species Management Area			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<i>Travel Management:</i>			
Continue to manage public lands in the Management Area under the following OHV area designations: Open: 45,849 acres Limited to Designated Roads and Trails: 4 acres Limited to Existing Roads and Trails: 40,871 acres Closed: 307 acres	OHV area designations in the Management Area (87,031 acres) would be Limited to Designated Roads and Trails.	OHV area designa- tions 86,724 acres of the Management Area as Limited to Designated Roads and Trails for all motorized ve- hicles and 307 acres as closed to all motorized vehicles.	Same as Alternative B.
<i>Fish and Wildlife Management:</i>			
In collaboration with UDWR and other interested parties, develop new wildlife water sources in areas where field studies reveal the need to maintain healthy, viable populations of mule deer or other game and non-game species.			
<i>Vegetation Management:</i>			
The use and perpetuation of native plant species will be emphasized. However, when restoring or rehabilitat- ing disturbed or degraded rangelands, nonintrusive and non-native species will be ap- proved where native species: a) are not available b) are not economically feasible c) cannot achieve ecological objectives and/or d) cannot complete with al- ready established non-native species.	Use native species to maintain the resilience of native plant communities when implement- ing vegetation management activities. Consider the use of non-native species only in special circumstances when a suitable native species is unavailable and the non-native species has proven to be non-invasive.  Protect the genetic integrity of native communities by using source-identified seed and other materials during vegetation management.  Maintain the resilience of native plant communities to climate change by reintroducing native species that have been lost or introduce other suitable native species, where necessary.		
Specific weed treatments will be determined by plant species, site characteristics, and management objectives. A combination of approaches may be used to achieve the most environmentally sound results, including mechanical, biological, and chemical techniques or changes in land use.			

Table 2-72 Comprehensive Travel and Transportation Management

Table 2-72 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Goal</b>			
	Compatible traditional, current, and future use of the land is sustained by establishing a transportation system that contributes to protection of sensitive resources, promotes dispersed recreation, and minimizes user conflicts.		
<b>Objectives</b>			
It is BLM’s objective to continue to work closely with Washington County officials to ensure that use and enjoyment of existing roads and trails is permitted under safe and prudent conditions and that responsibility for maintenance is properly defined in road maintenance agreements or other appropriate documents. It is also BLM’s objective to work with municipalities, Washington County, the Utah Department of Transportation, and other affected parties in defining and planning for future transportation needs, locating environmentally compatible route Alternative, and resolving land use conflicts related to transportation systems where public lands are involved.	Sustain or expand, where needed, a variety of existing motorized, mechanized, and non-motorized trail and travel opportunities to meet public and administrative needs.  Public access, resource management, and regulatory needs are considered through transportation planning, incorporating consideration of access needs and the effects of and interaction among all forms of travel, including motorized, mechanized, and non-motorized/non-mechanized travel.  Coordinate travel management with adjacent BLM field offices and other agencies where possible.  Provide opportunities for sustainable motorized, mechanized, and non-motorized/non-mechanized recreation on public lands.		
<b>Management Guidance Common to All Alternatives</b>			
The BLM would coordinate transportation management with adjacent federal agencies, state and local governments, and authorized users.			
<b>Management Actions</b>			
Mountain bike use on public lands will be subject to the open, limited, and closed designations described in the SGFO RMP Table 2-9 and shown on Map 2.11.  (Map 2-51)	Remove the existing mountain bike area designations. The route designation process will address route designations for all user types.		
<i>OHV Area Designations:</i>			
No similar action.	Individual route designations are implementation-level decisions that will be addressed in the TMP and tiered to the OHV Area Designations in this plan.  A map of the Transportation System can be found at <a href="http://www.blm.gov/nxld">www.blm.gov/nxld</a> .		



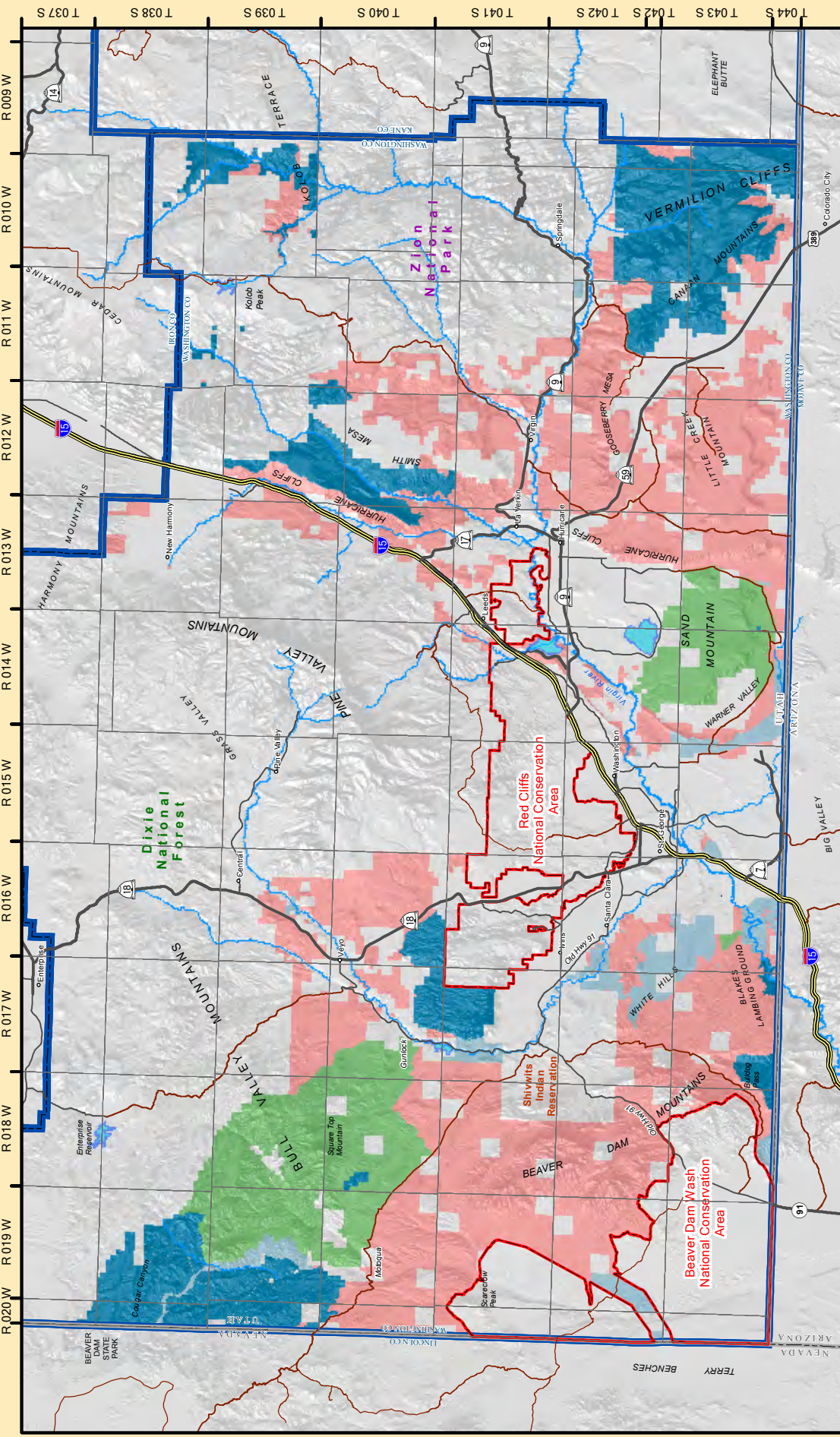


Mountain Bike Area Designations - St. George Field Office - Alternative A (No Action)

Table 2-72 Comprehensive Travel and Transportation Management			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Open to Cross Country OHV use: 80,668 acres	Open to Cross Country OHV use: 21,442 acres	Open to Cross Country OHV use: 19,803 acres	Open to Cross Country OHV use: 24,094 acres
Limited to Existing Routes: 297,042 acres	Limited to Designated Roads and Trails: 386,563 acres	Limited to Designated Roads and Trails: 385,033 acres	Limited to Designated Roads and Trails: 384,209 acres
Limited to Designated Roads and Trails: 26,937 acres	Closed to OHV use: 112,427 acres	Closed to OHV use: 115,591 acres	Closed to OHV use: 112,129 acres
Closed to OHV use: 115,786 acres  (Map 2-52)	(Map 2-53)	(Map 2-54)	(Map 2-55)
No similar action.	Upon completion of the TMP, all acres under Limited to Existing category will shift to Limited to Designated category.		
No similar action.	All cross-country (off-transportation system) motorized or mechanized travel would be prohibited, with the following exceptions: a) Designated Open OHV Areas; b) Minimum necessary for administration of the area; c) For emergency purposes; d) Minimum necessary for the exercise of a valid existing right or authorized use.		
No similar action.	In areas designated as Limited to Existing or Limited to Designated, allow motorized vehicles to pull off of a route up to 100 feet to either side of the route centerline for the purpose of parking or camping. Monitor this use on a continuing basis. If monitoring results show degradation of natural resources within the 100 foot corridor, this option could be revoked by the Field Office Manager. Such revocations could be area-wide or site-specific.		
No similar action.	Within designated ACEC's, unless otherwise posted, OHV area designation is Limited to Designated Roads and Trails with use of the shoulder and immediate roadside to allow for vehicle passage, emergency stopping, or parking.		
No similar action.	Use of non-motorized, wheeled game carriers to retrieve game kills or collect antlers would be allowed in all areas except designated wilderness. Motorized game retrieval or antler collection would be prohibited.		
Public Education and Interpretation			
No similar action.	Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that inform visitors about appropriate public lands etiquette, including OHV etiquette.  Provide educational materials through various media and venues (e.g., trailhead kiosks, web-sites) that encourage motorized users to use existing disturbed areas for parking and camping.		



OHV Area Designations - St. George Field Office - Alternative A (No Action)

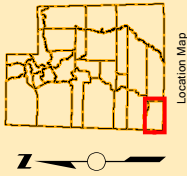


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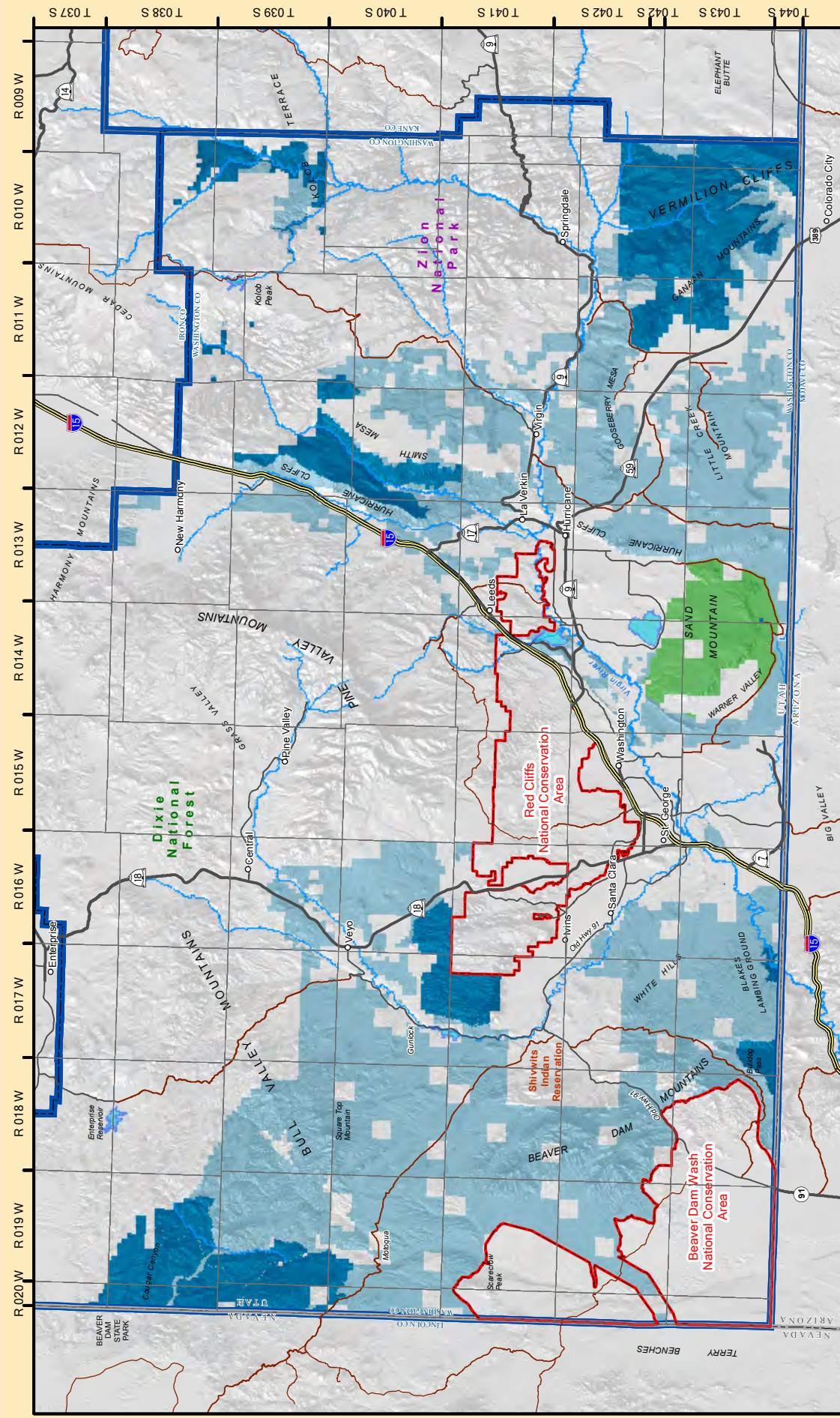
This product may not meet BLM standards for accuracy and content. Different data layers may not align perfectly due to some misalignment of data layers.

Note: Decisions in this document only apply to BLM lands.

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OHV Area Designations - St. George Field Office - Alternative B

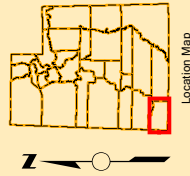


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This product may not meet BLM standards for accuracy and content. Different data layers may not align perfectly due to some misalignment of data layers.

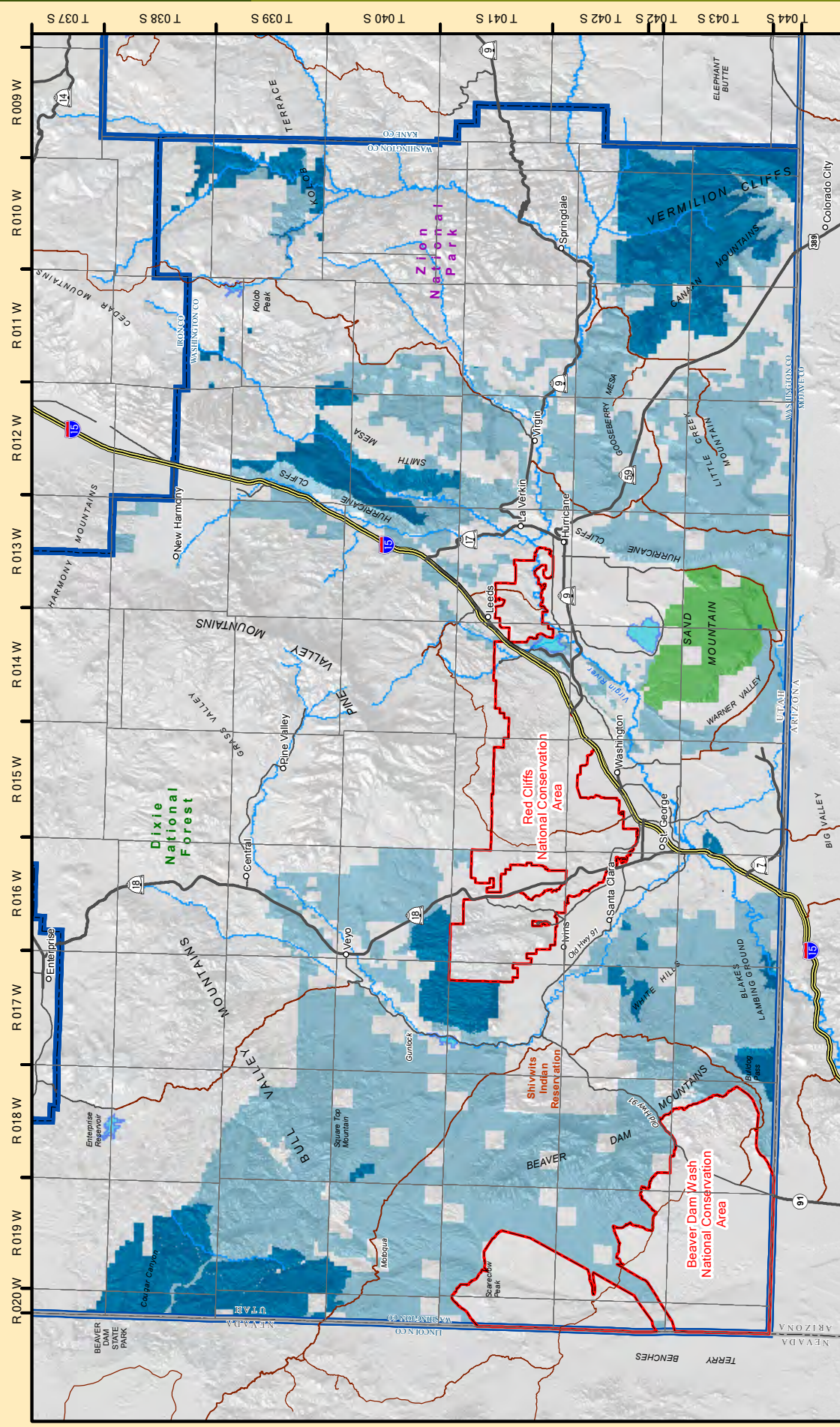
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OHV Area Designations - St. George Field Office - Alternative C








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 Closed to Motorized Vehicles

 Limited to Designated Roads & Trails

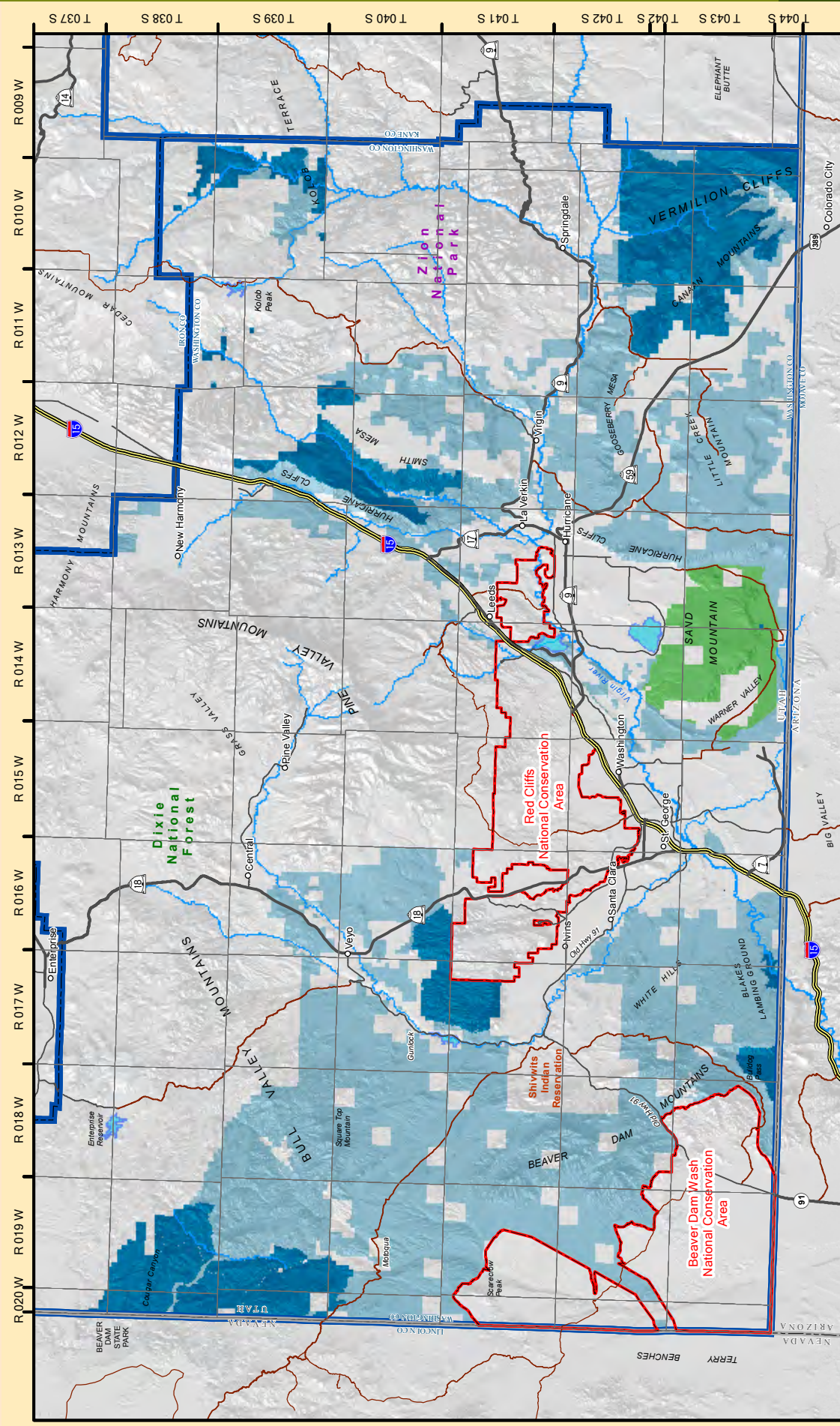
 Open to All Vehicles


 National Conservation Area Boundary (Outside Plan Amendment Area)

 Field Office Boundary

 State Boundary

OHV Area Designations - St. George Field Office - Alternative D








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 Closed to Motorized Vehicles

 Limited to Designated Roads & Trails

 Open to All Vehicles

 National Conservation Area Boundary (Outside Plan Amendment Area)

 Field Office Boundary


 State Boundary



Table 2-73 Comparative Summary of Impacts for SGFO RMP Amendment

Table 2-73 Comparative Summary of Impacts for SGFO RMP Amendment			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Areas of Critical Environmental Concern</b>			
Alternative A would not designate any new ACECs and would continue to manage 8 ACECs (102,317 acres, located outside the NCAs) administratively designated through the 1999 St. George Field Office RMP. Management prescriptions for existing ACECs would remain unchanged.  The relevance and importance values of the existing ACECs would continue to be protected through retention of public lands in federal ownership, management as Avoidance areas for ROWs, and restrictions on fluid mineral leasing, mineral materials disposal, and other land uses. Continued management as ACECs would continue to provide long-term protection of relevance and importance values on 102,317 acres of public land.	Alternative B would designate three new ACECs, totaling 3,880 acres, a 3.8% increase in public land acreage under special management through ACEC designation, when compared to Alternative A.  The relevance and importance values of the three new ACECs would be protected through retention of public lands in federal ownership, management as Avoidance areas for ROWs, and restrictions on fluid mineral leasing, mineral materials disposal, and other land uses.	Alternative C would designate 14 new ACECs, totaling 14,287 acres, a 14% increase in public land acreage under special management through ACEC designation when compared to Alternative A.  The relevance and importance values of the 14 new ACECs would be protected through retention of public lands in federal ownership, management as Avoidance areas for ROWs, and restrictions on fluid mineral leasing, mineral materials disposal, and other land uses.	Alternative D would not designate any new ACECs and would continue to manage 8 ACECs designated in the 1999 St. George Field Office RMP (102,317 acres). Management prescriptions for existing ACECs would remain unchanged.  The relevance and importance values identified for potential ACECs would be protected through management decisions from the SGFO RMP related to special status species and riparian areas, that restrict land uses in critical habitats and ecologically sensitive areas.  The relevance and importance values of the existing ACECs would continue to be protected, as described under Alternative A on 102,317 acres of public land.
<b>Management of Priority Biological Conservation Areas</b>			
No similar action.	Pursuant to OPLMA at sec. 1979 and supported by Secretarial Order 3289 and Executive Order 13443, Alternative B, C, and D would identify and manage the approximately 87,031-acre Bull Valley Mountains Multi-species Management Area as a priority biological conservation area ( <b>Map 2-50</b> ) to protect wildlife habitats and migration corridors.		
Public lands would remain available for transfer from federal ownership.	Management direction would retain all public land in federal ownership and authorize acquisition of non-federal lands through purchase, exchange, transfer, or donation, providing a higher level of protection to habitats and migration corridors than under Alternative A.		
Public lands would remain available for renewable energy leasing, new FLPMA ROWs, outside of designated utility corridors, open to fluid mineral leasing and mineral material disposal, with some restrictions. Wildlife habitats and migration corridors on approximately 85,000 acres of public land could be impacted by developments.	Management of 72, 423 acres as ROW Avoidance area, open with restriction to fluid mineral leasing and mineral material disposal would provide a substantially higher level of protection for crucial habitats and migration corridors, when compared to Alternative A.	Management of 87,031 acres as ROW Exclusion area and as closed to renewable energy and fluid mineral leasing would provide the highest level of protection for crucial habitats and migration corridors, when compared to all other Alternative.	Same as Alternative A.
<b>Travel and Transportation Management (OHV Area Designation)</b>			
Under all Alternative, designated Wilderness areas and Wild and Scenic River corridors would be managed as Closed to all motorized vehicle travel.			

Table 2-73 Comparative Summary of Impacts for SGFO RMP Amendment			
Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Open to Cross Country OHV use: 80,668 acres  Limited to Existing Routes: 297,283 acres  Limited to Designated: 26,940 acres  Closed to OHV use: 115,820 acres  Under this alternative, there would be no impact on travel and transportation management.	Prior to completion of the TMP, OHV area designations are:  Open to Cross Country OHV use: 21,371 acres  Limited to Existing Routes: 358,882 acres  Limited to Designated: 27,029 acres  Closed to OHV use: 113,151 acres  Under this alternative, there would be minor, short term impacts on travel and transportation management, related to changes in the acreages managed as Limited to Existing Routes and Open to cross-country travel. The reduction in acreage of the Open OHV area designation affects public lands that do not meet the criteria for designation as open to cross-country travel due to steep mountain terrain and deep canyons.	Prior to completion of the TMP, OHV area designations are:  Open to Cross Country OHV use: 19,803 acres  Limited to Existing Routes: 359,657 acres  Limited to Designated: 25,376 acres  Closed to OHV use: 115,596 acres  Same as Alternative B.	Prior to completion of the TMP, OHV area designations are:  Open to Cross Country OHV use: 24,089 acres  Limited to Existing Routes: 356,155 acres  Limited to Designated: 27,067 acres  Closed to OHV use: 113,121 acres  Same as Alternative B.
Following completion of the TMP, all acres under the Limited to Existing category will shift to Limited to Designated category. There would be minor impacts on travel and transportation management, related to changes in the acreages managed as Open to cross-country travel. The reduction in acreage of the Open OHV area designation affects public lands that do not meet the criteria for designation as open to cross-country travel due to steep mountain terrain and deep canyons.	Following completion of the TMP, all acres under Limited to Existing category will shift to Limited to Designated category. There would be minor to moderate impacts on travel and transportation management, related to changes in the acreages managed as Limited to Existing Routes and Open to cross-country travel. The reduction in acreage of the Open OHV area designation affects public lands that do not meet the criteria for designation as open to cross-country travel due to steep mountain terrain and deep canyons.	Same as Alternative B.	Same as Alternative B.



Table 2-73 Comparative Summary of Impacts for SGFO RMP Amendment

Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Socioeconomics</b>			
<i>Economic Impacts – Market Values</i>			
Motorized recreation (annually): \$4,820,700 Total Economic Output \$1,655,700 Labor Earnings 70.7 Jobs ACEC Designations: No new “designation effects” (no new ACECs)	Motorized recreation: Same as Alternative A (differences not quantifiable)  ACEC Designations: Negligible “designation effects” (minimal new ACECs)	Motorized recreation: Same as Alternative A (differences not quantifiable)  ACEC Designations: Negligible “designation effects” (14 new ACECs) given ACEC sizes and locations	Motorized recreation: Same as Alternative A (differences not quantifiable)  ACEC Designations: Same as Alternative A
<i>Economic Impacts – Nonmarket Values</i>			
Supports nonmarket values of current OHV and ACEC designations.	Relative to Alternative A, similar OHV-related non-market values, negligible increase in ACEC-related nonmarket values.	Relative to Alternative A, similar OHV-related non-market values, increase in ACEC-related nonmarket values.	Relative to Alternative A, similar OHV-related non-market values, same ACEC-related nonmarket values.
<b>Social Impacts</b>			
Motorized Recreation Stakeholders, Livestock Grazing Stakeholders and Economic Development Stakeholders would view favorably. This would be unsatisfactory to Habitat and Resource Conservation Stakeholders and Non-Motorized Recreation Stakeholders.	Relative to Alternative A, would be favored by Habitat and Resource Conservation Stakeholders and Non-Motorized Recreation Stakeholders. Less preferred by Motorized Recreation Stakeholders and Livestock Grazing Stakeholders. Similar to Alternative A for Economic Development Stakeholders.	Relative to Alternative A and B, would be favored by Habitat and Resource Conservation Stakeholders. Similar to Alternative B for Motorized Recreation Stakeholders, Non-Motorized Recreation Stakeholders, and Livestock Grazing Stakeholders. Least favorable alternative for Economic Development Stakeholders.	Similar to Alternative B for Motorized Recreation Stakeholders, Non-Motorized Recreation Stakeholders, and Livestock Grazing Stakeholders. Similar to Alternative A for Economic Development Stakeholders. Unsatisfactory to Habitat Resource Conservation Stakeholders.